erican/riisan The Warm Air Heating & and Sheet Metal Journal

Vol. 97, No. 22

CHICAGO, JUNE 8, 1929

\$2.00 Per Year

The BIGGEST selling Furnace Fan on the market-

Recommended and sold by these reliable firms

BAKER-PAYNE-VOYE Co. Boston, Mass.

CARR SUPPLY CO ... Chicago, Ill.

C. L. FEATHERSTONE FUR-NACE CO. Spokane, Wash.

FOLLANSBEE BROTHERS CO., P.ttsburgh, Rochester, Cincinnati, Memphis, Detroit, Indianapolis, Milwaukee, Louisville.

FLORAL CITY HEATER CO... Monroe, Mich.

FOX FURNACE CO.... Elyria, Ohio

HEATING & SUPPLY CO....... Pattsburgh, Pa.

HENRY FURNACE & FOUNDRY CO., Cleve'and. O; Indianapolis, Ind.; Pittsburgh, Pa.

м. к. ноке ..

KELLEY-HOW-THOMSON CO... Duluth, Minn, W. E. LAMNECK CO......Columbus, Chio

LENNOX FURNACE CO., Inc ... Syracuse, N. Y.

LENNON FURNACE CO. OF CANADA, LTD., Teronto, Gn. ario and Winnipeg, Man.

MIDLAND FURNACE CO...... Columbus, Ohio

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NEW IDEA FURNACES, LTD...
Ingersoll, Ont., Can,

THE OHIO SHEET METAL & MFG. CO..... Dayton, Ohio

J. M. & L. A. OSBORN CO...... Cleveland, O.; Buffalo, N. Y.

PEASE FOUNDRY CO., Ltd.... Toronto, Ontario, Canada

PENINSULAR STOVE CO..... Detroit, Mich. PORTLAND STOVE FOUNDRY CO..... Portland, Maine

RICHARDSON & BOYNTON CO. New York, Ch'cago, Boston, Phil-adelphia, Buffalo, Minneapolis, Newark, N. J.

WESTERN STEEL PRODUCTS CO. Duluth, Minn.

WISE FURNACE CO. . . Akron, Ohio

-ask the one nearest you to tell you all about it

Mfg. By THE A. H. ROBINSON COMPANY

> Massillon, Ohio



"Sitting on top of the heating World"



ROBINSO Heat Distributor

The Only Weekly Covering the Field



Residence of Mr. Max Kaiser, 1397 Stark St., Portland, Ore.

Premier Installation by Isler Metal Wks., Inc., 109 E. 12th St., Portland, Oregon



PEOPLE who live in homes like this one want the best there is in warm air heating—and are willing to pay for it. That's why they choose Premier DeLuxe Heaters and why Premier Dealers don't have to worry about cut-price competition,

The sixth of a series of twelve advertisements to appear on this page. what you want is

AFTER all is said and done, that's what every furnace dealer wants -more profits. —more profits.

SOME furnace dealers figure the only way to make more profits is to a sold furnace. Some furnaces. Some furnaces and sell more furnaces. of their cut-price of their cut-prices and sell more store or one of furnaces are sold but profits gutter-fight with a whale of a lot of furnaces are sold but profits. The result is that a whale of a lot of furnaces are less than ever. PREMIERWARM AIR HEATER CO., DOWAGIAC, MICH.

A FEW dealers are waking up to the fact that quarreling over price and is a waste of time. A few are waking up to the fact that if they can ask a decent price and make a man really want a furnace, they can ask a decent price competition. get it despite cut-price competition.

THESE few are choosing to handle Premiers as a matter of course. THESE few are choosing to handle everything that a home of find the Premier DeLuxe they recognize everything their personal selling to the Premier described by the premier gives their personal selling the Premier punch and pep into their personal of the wants in a furnace. In the punch and pep into their personal selling they need to put punch and pep into didn't get out of the everything they need to put punch and pep into didn't get out of the wants in a furnace.

THE Premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier Plan of Profits is a safe sensible plan for selling more than the premier plan of Profits is a safe sensible plan for selling more than the premier plan of Profits is a safe sensible plan for selling more than the premier plan for selling more than the plan for selling m

cut-price gutter-ugut submer?

THE Premier Plan of Profits is a safe, sensible plan for selling more throwing without cutting prices and throwing furnaces and making more profits. THE Premier Plan of Profits is a safe, sensible plan for selling more and throwing without cutting prices and throwing furnaces and making more profits without cutting prices and throwing for Why not drop us a line asking for Why not drop us a line asking for which bats at your competitors. Why not drop us any way. The price was at your competitors obligating yourself in any way. The decay is a your will not be obligating yourself in any way.

Read the June issue of the Premier Pictorial. It's packed with fun and fight.

WE HELP YOU OVERCOME COMPETITION!

The

BENJAMIN FRANKLIN

"A Quality Steel Furnace At Sixty Five Dollars"

HOW many times has it been necessary to pass up an order for a furnace job because you could not MEET COMPETITION? Ask yourself this question and you will remember the job you didn't sell Smith, the one Jones bought from your competitor, the one that went into Brown's home and quite a number of others. Competition was too keen, but now you can meet All Comers, for the Benjamin Franklin is a quality steel furnace at a low price. Think of it—the Benjamin Franklin with such features as a full CAST IRON FRONT WITH WATER PAN AT TOP, AN OUTSIDE SHAKER LEVER, AN EFFICIENT RADIATOR, DOUBLE FEED DOORS AND A SUBSTANTIAL BASE RING AND MADE IN THE SAME GAUGE STEEL AS THE FAMOUS MIDLAND TRUESTEEL AT \$65.00. As a Benjamin Franklin dealer you have no fear of competition. No matter how large or small the installation, you can always quote a PRICE and WIN.



-WRITE TODAY FOR FULL DETAILS AND INFORMATION-



Every Midland product is backed by the entire organization of Midland. Every Midland product will give satisfaction and represents the integrity of a manufacturing company backed by unlimited finances. It is well to remember that the Midland Furnace Company manufactures steel fuvnaces exclusively and not as a side line. The name MIDLAND and the word FURNACE are SYNONYMOUS.

THE MIDLAND FURNACE CO. COLUMBUS, OHIO

WAREHOUSES-MARSHALLTOWN, IOWA; ATLANTA, GA.

IN DAYS GONE BY BEN FRANKLIN SAID:

"Profit is ever twofold; he who gains must profit him who buys."



MIDLAND FURNACES

ALL STEEL +++



CLEANER HEAT



THE time required to assemble a furnace and to install the job may be counted by the clock, but when you go to add up the

minutes, it's your profit and loss sheet that is affected—you make a decent profit, or take a kick in the pants—on the wallet pocket side. When we designed this remarkable new NIAGARA, the time required to assemble and to install it received quite as much attention and study as any of the

features that make for its greatly increased efficiency.

Result; a furnace that you can as-

semble and install in jig time. Parts that fit together like the joints of a fine steel fishing rod. When you figure a furnace job

with NIAGARA, and estimate the assembly and installation time, you can be sure that NIAGARA will see you through. Your men will probably have the job in, in less time than you allowed for the work. Time and men mean money—made or lost—in your

business more than in most. With NIAGARA, the element of time almost invariably means a greater profit for you.

Detailed information sent on request. Write for it.

The Forest City-Walworth Run Foundries Co.

Member National Warm Air Heating Association
2500 W. 27th St., Cleveland, Ohio

NIAGARA

WARM AIR HEATING SYSTEMS

Say you saw it in AMERICAN ARTISAN .- Thank you!



points listed below any section of the country is convenient Western territory.

Write for catalog or information.

ern Steel Products Co

130 Commonwealth Ave. Distributed by: Duluth, Minn. Atlanta, Ga......Moncrief Furnace Company Cincinnati, Ohio.......Niehaus Furnace Repair Co.

ake it on now-

FROM mere wages
TO real profits

sold 50% more FRONT RANK furnaces in 1928 than in 1927", say Snyder & Lehnen, of Lafayette, Ind. They are already well past the "traffic signal" at the head of the procession in their territory.



Ventilate, as well as Heat

What is finer than a single plant that ventilates the home and purifies the air—in addition to supplying warmth. Such a system consists of

- 1. FRONT RANK FURNACE, gas-tight and dust-proof.
- 2. FAN forces heat instantly to all rooms, near and far. Equalizes the pressure in each pipe. Works automatically.
- 3. AUTOMATIC CONTROL maintains even temperatures throughout the entire house and saves fuel.
- 4. AIR FILTER catches dust particles that would otherwise find their way into the rooms. It keeps the air clean.
- OZONIZER raises the oxygen content of the air. Keeps air pure. Eliminates odors and prevents respiratory diseases.
- HUMIDIFIER automatically supplies moisture to the air, and keeps it at the right humidity for comfort as well as health.

And Use the Favorite Fuel!

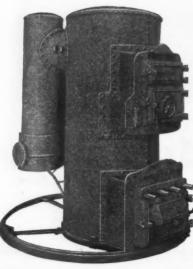
"We have sold twice as many FRONT RANKS as any other furnace", is the way the Roland-Swisher Co. of Richmond, Ind., express it. They, too, are so far ahead of their competitors that just a list of their FRONT RANK installations covers three of the four walls of their office.

"I have just finished up my four thousandth installation", says W. S. Grosjean, at Canton, Ohio.

And so the story goes!

There must be some underlying reason why FRONT RANK Dealers all over the country are leaving cut price competition away in the rear





N426



We found the reason when we interviewed a number of the outstanding FRONT RANK dealers. Their stories are so interesting and hold so many good sales making ideas that we would like to send them to any dealer who is not satisfied with the profits he is making from the furnace business.

There is a reason why warm air is regaining its rightful leadership in the heating of homes. That reason is high-class furnaces, such as the FRONT RANK, plus Standard Code Installations.

We are adding to our dealer group such men described by Roger Babson as having Industry, Integrity, Initiative, Intensity, and Inspiration. Perhaps YOU are one of these, and are the next man in line for big money. If you think you are (even though you are now an employee) write me personally for details.

Ho Sangurany

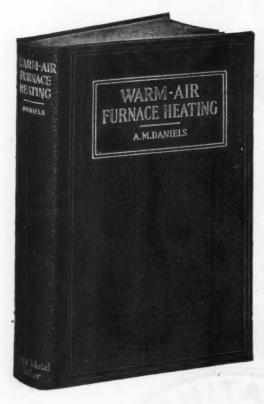
LANGENBERG MFG. CO.

4545 Euclid Ave.

St. Louis, Mo.

1888-41°YEARS OF CONTINUOUS SERVICE-1929

The Best and Most Complete Book



Warm Air Heating

IT IS the book that thousands have been asking for a book on Warm Air Furnace Heating that is UP-TO-DATE—a book that covers every phase of the subject giving exact data based on research work Written by A. M. Daniels.

Here is the book that will enable both the experienced furnace man and the student to obtain a working knowledge of up-to-date scientific warm air furnace heating.

Read over the Chapter Headings—notice the complete treatment of the subject.

Many tables are included and some big labor savers in calculating pipe sizes—also many diagrams.

Chapter Headings

- 1. Historical.
- 2. Typical Gravity Pipe Warm-Air Heating Systems.
- 3. Types of Warm-Air Furnaces.
- 4. Details of Furnace Construction.
- 5. Heat Losses.
- 6. Effect of Register-Air Temperature, Leader Area and Size of Wall Stack Upon Heating Effect Produced.
- 7. Insulating Coverings and Their Effect Upon Leader and Wall Stack Operation.
- 8. Casing Diameter vs. Furnace Capacity.
- 9. Air Supply to Furnace.
- 10. Furnace Capacity and Rating.
- 11. Register Grilles vs. Plant Capacity.
- 12. Chimneys and Flues.
- 13. Humidity.
- 14. Evaporating Pans.
- 15. Combination Heating Systems-Warm Air and Hot Water.
- 16. Gas Warm-Air Heating.
- 17. Oil-Burning Warm-Air Heating.
- 18. One-Pipe Furnace Heating Including Modifications.
- 19. Hot-Water Supply.
- 20. Leader Pipe Sizes.
- 21. Forced-Air Furnace Heating.
- 22. Coal as Fuel.
- 23. Pipe and Fittings.
- 24. Warm-Air Registers and Cold-Air Faces.

450 pages, 7x9 inches

Bound in semi-flexible imitation leather --

Stamped in gold --

PRICE \$5.00 POSTPAID

Send in your order today

AMERICAN ARTISAN, 139 No. Clark Street, Chicago, Ill.

Enclosed find \$5.00 for which send me WARM AIR FURNACE HEATING by A. M. DANIELS.

10% discount allowed on book and new or renewal sub-

scription if ordered together.

Street Number.....

......State..... Town

A furnace for every installation – The AIRTIGHT Horizontal Furnace

HERE is the furnace you need in order to secure the contracts for schools, churches, country clubs, lodges and the larger homes. With it you can do modern heating and ventilating and secure a good profit.

The AIRTIGHT can be had in any size for every purpose. Heavy cast iron special airtight construction and it burns any fuel including oil and gas most efficiently.

The AIRTIGHT is moderately priced. Our engineering service and this furnace will get you extra profits—ask about it now.

new GBRALTAR

FURNACES

Write today for this catalog No. 37 which describes the complete line—

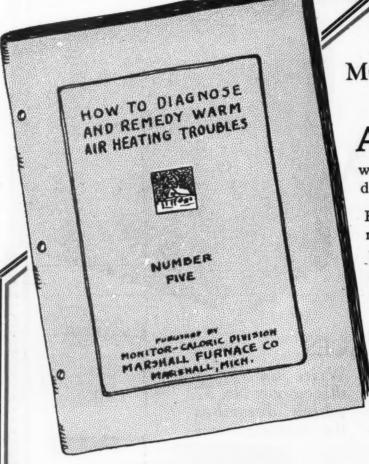




THE Improved Gibraltar Line of Top Radiator and Self-Cleaning Open Dome Furnaces have many new outstanding patented features. For over 37 years Gibraltar Furnaces have been leaders in quality and design. Gibraltar dealers get complete cooperation and fair prices which enable them to make good profits with these high quality furnaces.



P.H.MaGirl Foundry & Furnace
BLOOMINGTON Works
ILLINOIS

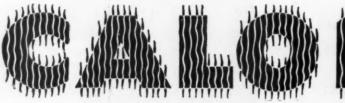


BEGINNING A NEW SERVICE FOR MONITOR-CALORIC DEALERS

A COMPLETE library will be published on the subject of warm air heating as outlined under the titles given below.

Books number 1, 2, and 5 are now ready for distribution, the others will be published from time to time and will be distributed only to bona-fide Monitor-Caloric dealers.

The demand for these books is so heavy that the first edition on some of them is practically exhausted, so speak for your copies early, if you are entitled to them as a Monitor-Caloric dealer.









TITLES OF THE BOOKS AS THEY WILL BE PUBLISHED

- 1—How to Plan a Warm Air Heating System.
- 2—How to Sell a Warm Air Heating System.
- 3—How to Install a Warm Air Heating System.
- 4—How to Conduct the Business End of a Heating Business for Profit.
- 5—How to Diagnose and Remedy Warm Air Heating Troubles.

E ACH book will be complete in itself, but all will be punched for binding into a complete library on warm air heating when all are assembled.

These books are non-technical, are not theory but the combined experience of many men in the heating industry covering a wide interval of time.

They are separated into subjects for easy indexing and can be distributed to the man where they are most needed. Numbers 1 and 2 to the salesman, Numbers 3 and 5 to the mechanic and Number 4 to the man in charge.

Never before has the subject of Warm Air Heating been covered so exhaustively, yet so clearly and concisely, as in these books and they are free to authorized Monitor-Caloric Dealers.

We can furnish repairs for all old models Monitors and Calorics

MONITOR-CALORIC DIVISION

MARSHALL FURNACE CO.

MARSHALL MICHIGAN



XXth Century Dealers have one of the most complete lines to sell. There's a XXth Century Heating Unit for every purpose at rock-bottom competitive prices.

XXth Century Hot Blast Cast Furnace. Standard of Fine Furnace value for 35 years.

XXth Century Hot Blast Steel Furnace. One of the most improved Steel Furnaces on the market.

XXth Century Hard Coal and Coke Furnaces. Given years of service in thousands of homes.

XXth Century Pipeless and Single Register Furnaces. Popular sellers for small homes and cottages.

Portage Furnaces Popular priced sellers that appeal strongly to contractors and real estate men.

XXth Century Gas Furnace. A tried and proven product of long standing reputation.

XXth Century Auxiliary Gas Burners. Excellent heaters for all the year or in-between seasons.

XXth Century Room Heaters. Widely used for heating stores and small buildings.

XXth Century Patented Overhead Systems. An important improvement in scientific heating licensed for use only by XXth Century Dealers.

10

XXth Century Horizontal System. Standard heating systems for schools, churches and other large buildings.

XXth Century Boilers.

Made in many types and sizes to meet all heating purposes.

XXth Century Accessories. The XXth Century Heating & Ventilating Company offers a wide range of accessories and parts, including-

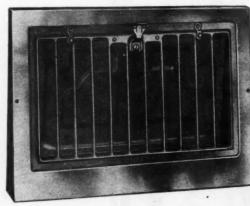
Regulators-Registers-Fans-Humidifiers.

Fill in this coupon for prices and information on the above lines.

The XXth Century H. & V. Co., Please give me complete information and Akron, Ohio. prices on item numbers..... For complete dealer proposition check here. Address Name





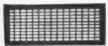




No. 170. Two-Piece Baseboard Register. A "space-saving, money saving," register for a 10" pipe. The quickly detachable face makes this series easy to set and permits effective non-streak installation.



No. 150 Two-Piece Baseboard Register



No. 255 Steel Cold Air



No. 200 Steel Floor Register



No. 350 Vertical No. 340 Horizontal Sidewall Registers

THE bar type styles of baseboard and sidewall registers give these numbers in "The Line of No Regrets" free air capacity approached by none. For example, the 8x12 size illustrated, with 3½ base extension, has full face and full throat capacity for 10" pipe. This increased air capacity permits the use of smaller, more compact sizes without reduction in heating efficiency, thereby insuring a neater looking job with more profit for the contractor. Why use larger, more conspicuous, more expensive registers?

It will pay you to use Hart & Cooley Registers. Complete stocks are carried by leading jobbers. Catalog upon request.

A representative stock of all standard items is carried at our Chicago Warehouse.





Heavy braces spotwelde along center of face an



Right-Angle flange and "sheet-metal" screw sav



Patented pinched-back fretwork gives greater strength



Genuine lacquers and nat



Specially designed containers protect finish till they're sold.

HARTE COOLEY REGISTERS

Manufactured by THE HART & COOLEY MFG. CO., New Britain, Conn.

NEW YORK 101 Park Avenue CHICAGO 61 West Kinzie Street PHILADELPHIA 1600 Arch Street

ALSO: RADIATOR ENCLOSURES AND A COMPLETE LINE OF CAST AND WROUGHT GRILLES

Two PROFITS with every sale AND it SELLS FAST

EY AUTOMATI REGULAT

NOW the old, always reliable hand draft is obsolete. The Staley Automatic Draft Regulator regulates the draft even better than if a person were to stand by the furnace constantly and open and close the draft. The very slightest wind and weather variations cause it to open and close automatically.

It is an ingenious device yet simple and thoroughly practical.



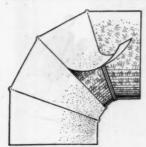
Fits on any SMOKEPIPE EASY TO INSTALL AND EASY TO SELL. Write for full illustrated descriptive circular and prices today.



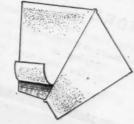
TESTED under all conditions-it reduces fuel bills -keeps the heat in the furnace-reduces stack temperatures. All working parts of rust resisting non-corrosive metal and outside of smoke pipe. You make a profit on the article and on the installa-

It costs little but does a big job. Used on gas, coal or oil fired furnaces or boilers.

GRAY BROTHERS, INC., PLANO, ILL.



Asbestos Corrugated Paper



ASBESTOS ELBOW SHEETS



Neater --- Quicker Asbestos Pipe Covering

YOU use factory made furnace pipe because you have learned it is more economical to do so than

have learned it is more economical to do so than to make your own. Progressive installers everywhere, for the same reason, have welcomed Sal-Mo Pipe Covering in these two new forms. Sal-Mo Asbestos Elbow Sheets come packed in a handy carton, containing 100, or 25 sets, for 8 inch, 9 inch, 10 inch and 12 inch elbows, or 45° angles. For improved furnace efficiency, cover pipes with Sal-Mo Asbestos Corrugated Paper, with Elbow Sheets and Pipe Joint Tape.

Send the coupon today.

Stocked by the BEST Wholesale Used by the BEST Installers Wholesalers Also manufacturers of Asbestos Paper, Millboard, Pipe Covering, etc.



joints, Sal-Mo Asbestos Joint Tape prcvides the right width in handy roll form, always ready for use. No waste-no ragged

ASBESTOS

PIPE JOINT

If you cover only the

edges - no sawing. 1000 lineal feet per

COMPANY

package.



MOUNTAIN SALL

176 W. Adams Street, Chicago, Ill.

Gentlemen:-Send me FREE samples of Pipe Joint Tape and Elbow Sheets.

Say you saw it in AMERICAN ARTISAN-Thank you!

AVAILATE IMPEDIATE IMPEDIATE OF LAME OF LAME

Production of LAMNECK registers has registers has now caught up with sales. We have taken care of the immediate require ments on an avalanche of orders received even before production started and are now able to make immediate delivery of LAMNECK floor reg. isters and cast cold air faces. MORE EFFICIENT

We wish to thank the many friends who placed orders for their entire requirements, for their faith in the ability of this organization to deliver the goods as promised. To the trade everywhere we reaffirm our determination to use every possible resource to extend prompt LAMNECK service in this line of cleaner, more effic-

Faus close right up against grill bars 80 that a vacuum sweeper easily removes all dust. Both women and men appreciate this women and men appreciate theat. feature. It makes for cleaner heat. MORE SANITARY







The faus offer no additional re-





Style 902 Baseboard Register



Style C
"Cobble" Cold Air Face



UPER~REG

T&B Registers Are In Step with the Times

Everything about the T&B Line of Registers is directly in line with modern warm air heating developments. Designs - finishes - mechanical improvements that reduce installation time and insure user satisfaction - all in the spirit of today. Our service is another feature that is up and doing, for a T&B warehouse or distributor is located in every principal shipping point in America. When you need something quickly you can get it. If you haven't seen a T&B Catalog lately, send for one. Let us show you some of the new, valuable items recently brought out, such as Style 302 Sidewall Register (two-piece)—the new FERROCRAFT Baseboard and Sidewall Registers with beautiful cast grille facings - and, of course, the famous "Cobble" Line of Cold Air Faces and Floor Registers.

TUTTLE & BAILEY MFG CO.

Established 1846

441 Lexington Avenue - New York City



VERNOIS LEADERSHIP

has been maintained by consistent quality



VERNOIS GAS RANGES AND CIRCULATORS

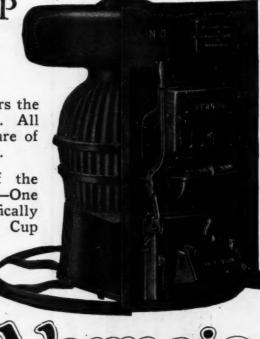
HE name VERNOIS bears the reputation of high quality. All of the VERNOIS products are of time-proven and tested merits.

A few of the features of the VERNOIS Furnace are:-One Piece Cast Radiator Scientifically designed -Wide deep Lock Cup Joints-Large, tight Ash Pit and Fire doors-Carefully selected Iron used throughout.

Write us today for information. We will be glad to give you full particulars.

Write for Catalog.

MT. VERNON FURNACE & MFG. CO. Mt. Vernon, Ill.





FURNACES



WISE OPEN DOME CAST FURNACE

BOTH the Open Dome and the Wise 20 Series have a new Cellular Firepot. It is One-piece and extra heavy. The Open Dome also has a new Elbow Shaped Flue Collar on the inside, turned up so all the heat must follow the castings to the top.

The 20 Series, besides having the newly designed Cellular firepot, has a new Patented Radiator. The feed chamber and the top of the radiator are constructed so as to allow communication between them which brings the opening of the fire flues

ISE

FURNACES

high quality types

-Enabling you to confine all your furnace purchases to one source. Write for Catalog No. 23 today



STEEL FURNACE

WISE 20 SERIES

of the radiator directly into the feed chamber, making the flues readily accessible for cleaning through upper feed door.

The Wise Steel Furnace is not just another steel furnace but one having exclusive features. The boftom of the radiator has a Cast Iron Soot Box and Glean - Out. The Wise Steel Furnace is both riveted and welded and has special design grates.

It is a steel furnace

It is a steel furnace that you will instantly recognize as having WISE quality and distinctiveness.

The WISE FURNACE COMPANY . . . AKRON, OHIO



FINISHED IN AUTUMN RED for 100% Selling

THE professors tell us that 1 80% of our impressions are received through the eye.

All right. The new Series "C" is finished in Autumn Red and it makes a mighty favorable impression. Built into and all through Moncrief are Ten Points of superiority that will make the remaining 20% impression.

Let us explain the good points of the Moncrief Proposition.

The Henry Furnace & Foundry Co. 3471 E. 49th St. Cleveland, Ohio

Distributors:

Distributors:

Carr Supply Co., 412 No, Dearborn St., Chicago, Ill. August Bery & Son, Mack Ave. at Drexel, Detroit. The Henry Furnace & Foundry Co., Pittsburgh, Pa. Frontier Water & Steam Supply Co., 366 Oak St.—481 Elliott St., Buffalo, New York.
Johnson Furnace Co., Kansas City, Mo. E. A. 'Higgins, 112 Douglas St., Omaha, Neb. Moncrief Furnace & Mfg. Co., Dallas, Texas. E. W. Burbank Seed Co., 29 Free St., Portland, Me. J. F. Conant, Ry. Term. Warehse., Troy, N. Y. Wilkes-Barre Hdwe. & Stove Co., 18-20 So. Washington St., Wilkes-Barre, Pa.

The Crawford Heating Co., Steubenville, Ohio.

EASTERN OFFICE

Room 1306, 11 W. 42nd St., New York City,

Room 1306, 11 W. 42nd St., New York City. E. L. Garner, Manager.

We supply everything used on a warm air heating job.

What your customers NEED and WANT today--and for years to come -

IF your furnace business hasn't been as good as it used to be a few years ago—LOOK INTO TODAY'S MERCHANDISING METHODS and notice that, the public DEMANDS SOMETHING BETTER. Perhaps you have failed to recognize that TODAY the public is busing RETTER. that TODAY the public is buying BETTER QUALITY and only those products which offer FEATURES THAT MEAN EFFICIENCY and ECONOMY in operation.





THE Ath-A-Nor is more popular today than ever before because of those very reasons.

Its design and quality appeal to the buyer because they are BETTER.

Its famous SMOKELESS feature is something that folks want more today than ever before.

The Ath-A-Nor PATENTED THREE-WAY AIR BLAST is a distinct feature that means quicker heating, complete combustion and economy of fuel. Its heavy, well built construction, deep joints and other features make good business for Ath-A-Nor dealers.

There are other furnaces in the complete May-Fiebeger line—every one a quality furnace. There are cast and steel furnace of several de-signs and all are reasonably priced. Write for full details today.

The May-Fiebeger Company Newark, Ohio

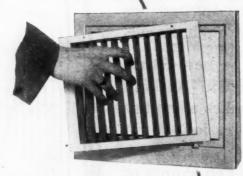


TRULY DISTINCTIVE REGISTER YET SO PRACTICAL

NEW STANDARD STEEL BASEBOARD REGISTER

THE wafer thin shutters allow maximum air capacity and the operation is so simple and effective that positive air control is possible. Open or closed the New Standard presents a neat, pleasing appearance and it can be had in all colors to match modern interior decorating.

Folks are buying the New Standard because it is modern.



THE face of the New Standard is secured by two screw heads and is easily detachable. Shutters are of polished steel and finished same as register. It is the easiest register to keep clean. Constructed of the highest grade durable material and made in all sizes to conform to the Standard Code for which it is named.

EXCLUSIVE DESIGN

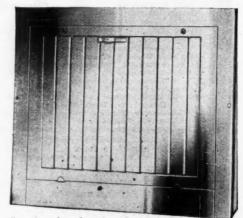
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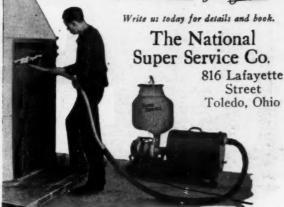
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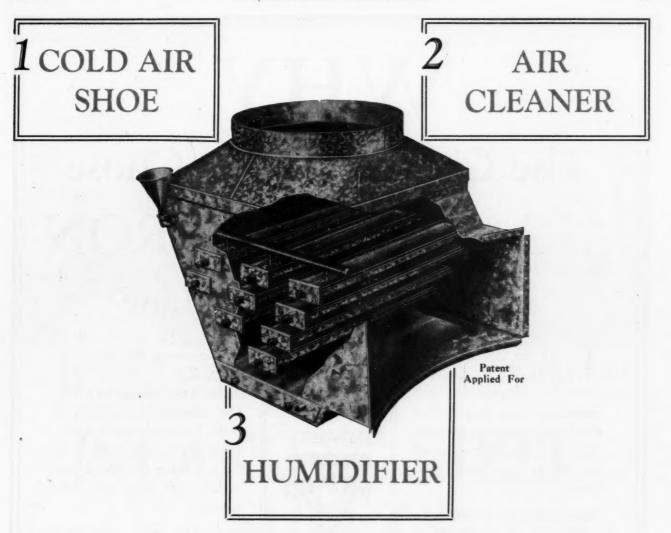
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The City of Detroit Chose ARMCO INGOT IRON

For Their New Pipe Line

THAT the City of Detroit chose rustresisting ARMCO Ingot Iron for their

new 9,300 foot water main is of tremendous importance to sheet metal contractors who are interested in giving their customers the most economical sheet metal.

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Iron's reputation for lasting endurance won. The Board of Water Commissioners know that long service from ARMCO Ingot Iron pipe line warrants the added initial investment.

This is an outstanding recognition of ARMCO Ingot Iron's superiority.

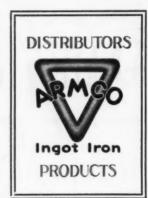
For twenty-one years, ARMCO Ingot Iron has met the demands of service conditions. It was developed to fill a definite need for long lasting metal. It was not just a chance discovery, but the result of directed research.

Detroit is not building for a day. The judgment of the Board of Water Commissioners is sound, and their reasoning is similar to that which the sheet metal contractors must meet with their customers.

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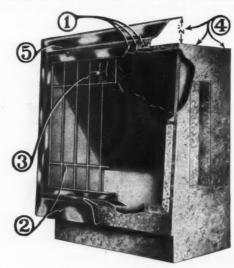
--- and when the prospective customer says:

> "Yes, but the walls become streaked with dirt from the registers."

You say -- "NO Sir, not with



REGISTERS



-then you show them why these features prevent the walls from becoming streaked

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It is quality built of heavy high grade castings perfectly fitted. It is a finished job in every particular-unusually deep cup joints-large water pan-large doors-deep ash pit-large tight fitting clean out door-one piece base ring and ash pit bottom-in fact every feature you want.

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"With Anaconda Copper we can give our customers the kind of work they want"



... says Jake Dermon Sheet Metal Contractor of Memphis, Tennessee

1000

SKILLED workmanship and reliable materials—this is the winning combination which has brought prestige and profits to the Dermon shop in Memphis, Tenn. Mr. Dermon has found Anaconda Sheet Copper extremely satisfactory to work with. He has found that his customers know Anaconda and that they have confidence in him and the job when they know the work will be done with this well-known brand. Here is how he puts it:

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How hard have you tried to sell Standard Code installations and high quality furnaces? You'll be surprised to find that it is easier and more profitable work to talk quality than to install poor jobs.

The Weir will provide you with the kind of quality you can talk about—profitably.

The Weir from top to bottom is extra quality-write for a copy of the Weir "BOOK OF FACTS."

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The Highest Grade Steel Furnace Made

THE FURNACE FOR EVERY GOOD INSTALLATION



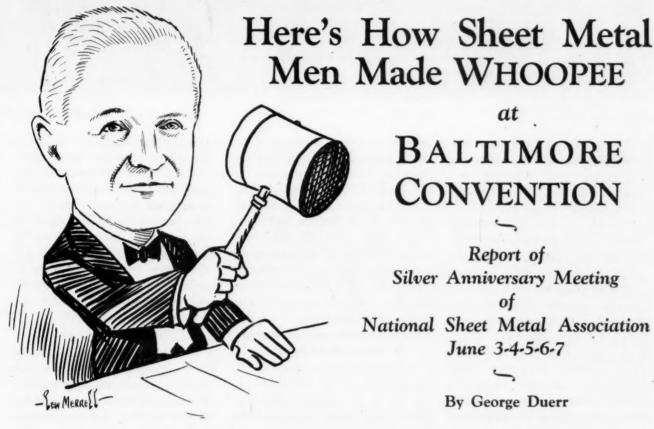




Vol. 97

CHICAGO, JUNE 8, 1929

No. 22



BALTIMORE CONVENTION

Report of Silver Anniversary Meeting National Sheet Metal Association June 3-4-5-6-7

By George Duerr

N^{EW} developments in the sheet metal industry that will make business better, discussion of the impracticability of the 5-year guarantee on roofing when the contractor is not permitted to make the specifications, and the final report on the completion of the Trade Development Book were the high points of the opening session of the Silver Anniversary convention, the National Association of Sheet Metal Contractors.

The meeting was opened Tuesday morning, June 4, 1929, in the Lord Baltimore Hotel, Baltimore, Maryland, by W. A. Fingles, Sr., general chairman of the convention committee. In his remarks Mr. Fingles recalled the occasion of the formation of the association and the purposes for which the organization was brought into being at Philadelphia, stating that at that time he had

Lardly expected to enjoy the pleasure of greeting the association membership in his home town on the 25th anniversary of the then young infant that was brought into being.

He further called attention to the fact that only four of the charter members, President Paul L. Biersach, Otto Goebel, John A. Pierpont and himself, were present at the convention marking the quarter century milestone of the association.

It is the duty of the general chairman of the convention to introduce the first speaker of the day, usually the mayor of the city in which the meeting is held, but in the absence of the mayor Mr. Fingles introduced the mayor's secretary, Theodore McKelden, who described briefly the History of Baltimore and some of the reasons for its rapid growth. In the midst of this the mayor made his appearance and continued. The mayor expressed himself as being particularly interested in the sheet metal industry, having been an apprentice and journeyman himself at one time, and for that reason was doubly cordial in his welcome of the boys to Baltimore.

W. C. Markle, secretary of the association, responded to the address of welcome in a most fitting and proper manner. He paid a compliment to the Baltimore boys in working as they did to make the convention the success he knew it was going to be, and which it was. The meeting was then turned over to President Biersach.

The appointment of committees was the president's first act upon assuming charge. The committees appointed were as follows:

Resolutions: J. A. Pierpont, M. J. Lieberman and Louis Rysdon.



The National Sheet Metal Contractors

Credentials: A. B. Rysdon, W. A. Fingles, Jr., and Wm. Hering.

Auditing: O. E. Hutchison, Joseph Gardner and Otto Goebel.

Nominating: Louis Rysdon, W. F. Angermyer, J. M. Holstner (elected), R. C. Richards and E. H. Riesmier (appointed). In making up this committee three men are nominated from the floor and the president appoints the other two. Nominations from the floor resulted in placing in nomination F. J. Hoersting, Louis Rysdon, E. H. Riesmier, W. F. Angermyer, R. C. Richardson, J. E. Piper and J. M. Holstner. Balloting was indulged in, Hoersting receiving 18 votes; Rysdon, 35; Riesmier, 23; Angermyer, 38; R. C. Richardson, 27; Holstner, 40; Piper, 21. The fourth and fifth highest in the balloting were appointed by the president in this case.

Then came the president's, secretary's and treasurer's report.

Annual Address of President Paul L. Biersach

The foundation of this organization was laid a quarter of a century ago with the object of furthering the best interests of those identified in the sheet metal industry, the education of those that required it and the protection of our interests in general. And here we are today on our eventful Twenty-fifth Anniversary, assembled in convention in the historic city of Baltimore to solve the problems with which the industry is confronted.

I know that we are all proud to celebrate this event, because it is

one that should encourage us to put forth greater efforts; to work for the progress of our organization and the industry. There are but four of the original organizers still with us, viz., W. A. Fingles, J. A. Pierpont, Otto Goebel and P. L. Biersach. I believe I am voicing the sentiments of these by expressing our satisfaction and pleasure in being able to be with you at the convention in Baltimore.

Trade Development Committee, Sheet Metal Book

We can report to you that the tremendous task of the Trade Development Committee which had under their charge the compilation of this book, entitled, "Standard Practice in Sheet Metal," that their labors are about at an end. The book is now in the hands of the printers, the Excelsior Printing Co., Chicago, and will be ready for distribution about August.

I will not go into detail on the same, but I will let George Harms do this when he makes his report. I must call your attention to the fact, however, that if we were not so fortunate to possess in our ranks a "George Harms," I fear that it would have been impossible to carry this huge project through to a successful conclusion.

Up to this time about 1,200 books have been subscribed and partially paid for; as 5,000 books have been ordered, it behooves us all to lend our assistance in disposing of the balance. Then we should think of printing our second 5,000 for dis-

posal, which ought to be accomplished without any great effort, as not only every architect and engineer, employers of the building industry, but also every employe in the sheet metal industry should be the owner of one. If this can be done, your association will be in a flourishing condition. So let us all unite in putting this over so that our efforts can be centered on other important organization work.

National Contractor

It is hardly necessary to elucidate materially on our wonderful publication. Since our able secretary has assumed control of the same, marked monthly improvements are noticeable.

Committees

You will appreciate the activities of our committees when you hear their reports, which will be very interesting and bring forth some new issues and problems which you should consider wisely. All of these committees have faithfully performed and your president appreciated their splendid work in our behalf.

Organization

Unfortunately funds were not available to carry on this work which is so necessary for the acquirement of new members; organization of localities as Local Units, etc., as all our time and money was spent and devoted to the book. Your president attended three state conventions, Pennsylvania at Lancaster, Illinois at Peoria, and Wisconsin in Milwaukee. All these con-



Convention Delegates and Visitors at Annapolis

ventions were successful in every respect and demonstrates an incentive towards bettering conditions for the sheet metal contractor through organization work. I regretted exceedingly at not being able to visit all the conventions during the year, but I was required to keep always in mind the fact that every dollar we earned must go to our book.

Finances

During the past years our finances have not been what they should be in an organization such as ours. Such a condition hampered us and practically voided the possibility of our using some of the funds for organization work. But this will surely be remedied now that we have the book out of the way and surely a good surplus should remain to us from its sale if the entire membership cooperates.

Obituary

With the profoundest regrets I wish to report the irreparable loss our organization has sustained through the death of some of our most active members and although I can not mention them all, still I can not refrain from speaking of such able and noble characters as C. N. Louis of Peoria and Harry J. Dettmers of Chicago. They were always at hand to assist with deeds, not words, and we certainly have felt their absence in the council of our association.

Outlook Favorable

In my opinion the outlook of the ensuing year is very promising and encouraging. With the production of our book out of the way I recommend, so far as the finances will permit, to put forth our efforts on organization work. I am quite sure that if personal visits are made either by our national secretary or an organizer, enlistments can be made as individuals, or local organizations. This work should be vigorously pushed and not allowed to lag.

I also wish to appeal personally to every member of our association to give my successor and the officers the greatest possible support. Remember, the officers can only succeed in their task for which you have elected them as your servants if you will cooperate with them. How much more effective would their work be if each member performed and did his duty towards our organization. So let us all determine to do something to increase the effectiveness and strength of our association.

In closing I wish to heartily thank every one of the many who have assisted me during the past year. It has been a great pleasure to work with our officers and for you, and my wish shall be that our organization shall prosper and grow. I attest to the loyal support of my fellow officers and hope that the incoming administration will be successful in their endeavors. My heart has been with our work and I shall not lose interest when I retire to the ranks.

In making his report the secretary stated all the available funds of the association were being used for completion and printing of the book and for that reason most of the other activities of the secretary's office were not being given the attention they deserve. As soon as the book is safely out of the way, however, that work will again be taken up and pushed with vigor.

Bennett Chapple Inspires

"What's Around the Corner in the Sheet Metal Business?" was the subject upon which Bennett Chapple, Sr., vice-president of the American Rolling Mill Company, discussed upon at the opening of the afternoon session. What Mr. Chapple had to say was listened to with the greatest intensity of interest, as he brought the sheet metal contractors a message of good cheer as only Mr. Chapple can bring such a message. The complete address will be found on another page of this issue. Look for it and read it carefully. It may be the answer to one of your biggest problems.

Stanley A. Knisely, director of publicity of the Sheet Steel Trade Extension Committee, gave a very interesting discourse on public apathy as the enemy to the sheet metal contracting business.

He pointed out, however, that the situation is not actually as bad as some sheet metal contractors like to paint it, calling attention to the large number of forces that are working together to improve conditions in the industry.

Some very interesting statistics have been compiled by the Sheet Steel Trade Extension Committee and as soon as they are released will show the contractor a way out in one respect at least.

George Harms then made what he considers his final report on the Trade Development Book. This report contains a survey of the work on the book and mention of E. A. Scott and W. C. Markle, who deserve special credit for the work they have done on the book. This report in full will be found on another page of this issue. Read it and learn how you can help in the distribution of this book when it makes its appearance.

E. A. Scott, publisher, Sheet Metal Worker, spoke on an appreciation of the value of the Trade Development Book to the sheet metal industry, stating his belief that few sheet metal men have a clear idea of just what that value is. He then stated the purpose of the book is to supply the architect with a standard of practice in the sheet metal industry so as to make it possible for the architect to specify sheet metal with a confidence that it will give the service and satisfaction desired.

He counseled sheet metal men to make the most of presenting the book to the architects by first studying it thoroughly so that they can enlighten the architect about its content and purpose for compilation. He told them to point out clearly that the book contains no advertising and no specific brands of material are mentioned in its pages; that the book has been compiled by the association with the sole object in view to place in the hands of architects full information on the best practice in the application of sheet metal. In other words, sell the association to the architects. For, after all, the best kind of advertising is that which gives information.

The distribution of the book is a real problem, according to Mr. Scott, and the sheet metal men must solve it by selling the idea to men who are not members of the association.

He offered the suggestion that the libraries, no doubt, would wish to purchase copies, and that there are perhaps 1,000 schools in which sheet metal work is being taught where additional copies could be disposed of.

George I. Ray offered a resolution that the Trade Development Committee be continued another year and that an order be given the printer of the Trade Development Book for a second 5,000 copies of the book immediately after the first edition is run off. This will save considerable expense. The motion passed.

George Thesmacher paid a high compliment to George Harms, stating that Mr. Harms personally had backed the production of the book to the extent of \$10,000, in addition to the vast amount of work he has put into it.

A very interesting discussion was given on Monel Metal, illustrated with slides, by A. H. Galley, International Nickel Company. This was enjoyed by all.

Louis Rysdon presented a recommendation from the Code of Ethics Committee to the effect that a rider be placed upon the Code of Ethics adopted by the association last year giving a 5-year guarantee.

O. E. Hutchison spoke in opposition to such a guarantee where the sheet metal contractor is not permitted to use his own judgment about the materials he employs or the manner in which they are erected.

George Thesmacher was of the opinion that a flat guarantee without modification is impossible of application, but contractor should not hesitate to guarantee where he is consulted as to materials and application.

George Harms also voiced a similar opinion.

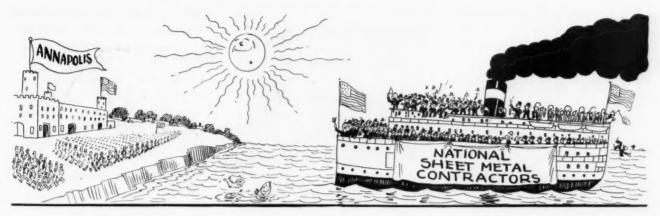
The matter was finally disposed of by referring it back to the committee for revision. A further report on this matter will be given later.

Never Knew So Much Could Be Packed Into One Day

Wednesday was a day of pleasure and recreation and what a day it was! Mr. Fingles prides himself on being a stickler for detail and with good reason. Why, in planning the day's activities he thought of everything. Not only of the big things, but of the little details that go toward making a success of any undertaking.

The snapshots taken at Annapolis and on the boat will be published in next week's issue of AMERICAN ARTISAN.

WATCH FOR THAT PICTURE NEXT WEEK



The day opened for the early risers with a trip through the Baltimore Copper Mills. Busses transported those who cared to go from the hotel to the mills. To describe all that I saw and learned about the production of copper sheets would require a volume of considerable magnitude. Guides were on hand to explain each process. The procedure opens with a melting furnace being loaded with pigs of copper shipped in from various copper mines. In this furnace the copper pigs are melted down and are poured off into annodes weighing in the neighborhood of 700 or 800 pounds. These annodes, although containing 99 per cent pure copper, are sent to the next department, that of electrolyzing, where by means of electrolysis the copper is refined and all of the gold, silver, and other foreign matter is removed. The process of electrolysis consists in passing an electric current through wires forming positive and negative poles immersed in a sulphuric acid solution, the sheet of copper to be refined forming the annode and the refined copper being the cathode. As the process of electrolysis proceeds, the copper annode is broken down and carried in minute particles across to the negative pole and deposited there. But in this process the other metals and impurities in the copper sink to the bottom of the tank, leaving the copper as deposited in an almost perfectly pure state.

From this metal the copper sheets are made. And all of these processes we saw, including the rolling, pickling, cleaning, tinning, burnishing and packing ready for shipment. In detailing this portion of the day's program, I want to say that the guides who accompanied us on the tour were extremely courteous, taking undue pains to explain each process in a manner that gave us a clear picture of the entire procedure. And I, for one, want these men to know that their efforts were greatly appreciated, as was the courtesy of the Baltimore Copper Mills in extending an invitation to visit the plant.

From the mills the delegates were taken to the pier where the City of Atlanta awaited them with those who had not cared to go through the mills. The ride down the Chesapeake Bay to Annapolis was a most enjoyable experience. There was dancing and singing on the boat and at noon a wonderful luncheon was served by colored waiters.

After luncheon a short business session was held, but between gazing at battleships and beautiful shore line, there was little attention paid to the meeting.

However, a very comprehensive report was read from C. W. Pansch on the Allied Construction Industries, with a recommendation that the association give its endorsement to the work. Inasmuch as the recommendation was fully in line with association's own Code of Ethics, the endorsement was immediately forthcoming.

Louis Luckhardt made a splendid report on the Vocational Education activities of the association, which was well received.

J. E. Merrick reported on the By-Laws Committee activities, and made a recommendation that an associate membership in the association is impractical, for the reason that the organization could not have two rates for dues without some change in the present method of collecting them.

J. T. Hay, Central Alloy Steel Corporation, gave an address in which in a very brief space of time he gave his audience a most comprehensive outline of what takes place when iron rusts, pointing out the causes for rusting and how oxidation may be prevented. His talk was very much enjoyed.

On the Grounds at Annapolis

Shortly after the close of the session on the boat, we reached Annapolis. Here everybody disembarked and assembled for the convention group picture. Then on to the parade grounds where at 5 o'clock the cadets were put through their paces and it was a very impressive sight to see regiment after regiment march out upon the field in parade uniform and maneuver with clock like precision in response to the orders of the officers in command

Following the display of military drill, the honor men were presented with various prizes for supremacy in work in the branches of the activities in which they excelled, this being graduation week at the U. S. Naval Academy, and thousands of people from all parts of the country were present. The presentation to the honor students was made by Secretary of the Navy Adams, and was very impressive.

The entire campus was pervaded with a gala atmosphere, and the enjoyment derived by the sheet metal people in attending a part of the graduation exercises at Annapolis spoke volumes in tribute to the excellent judgment of Mr. Fingles and his estimable committee in timing the convention just right and in every other way making it possible for the delegates to witness this spectacle.

Reembarking on the boat, the delegates were treated to a most gorgeous dinner of baked crabs, fried chicken, etc. This was followed by dancing, singing and other activities continuing until the boat docked again and the delegates were taken to the hotel by busses.

Guarantee Question Settled

Fred Bemmer, of the Associated Sheet Metal Employers of Chicago, reported on the Mooseheart plan. No further action seemed possible on this matter until the production of the Trade Development Book is out of the way; therefore the report was ordered filed and the committee discharged to be called into being again should occasion arise.

A. B. Rysdon was called upon for a report of the credentials committee. There were 74 of these turned in, 69 delegates' and 5 alternates'.

A. B. Rysdon also reported on the Accident Prevention Committee. This report indicated that action to stop adverse legislation on accident prevention is necessary at this time. Such legislation is hamstringing the activities of building contractors to such an extent, without accomplishing the desired objective, as to be a serious menace. A great deal of education is required to bring order out of chaos in this branch of activity.

Election of Officers

The election of officers resulted as follows:

President, J. E. Merrick, Louisville.

First vice president, George I. Ray, Charlotte, N. C.

Second vice president, Harry Stanyer, Dallas, Texas.

Third vice president, M. F. Lieberman, Ambridge, Pa.

Fourth vice president, George Clark, Chicago.

Treasurer, Joseph C. Gardner, Indianapolis.

Trustees

For the 3-year term: Louis Luckhardt, Pittsburgh; Jules Gerock, Jr., St. Louis; James Walsh, San Antonio.

For one year: W. C. Wiedermann and George F. Carrahar.

Sergeant-at-arms, O. W. Gragan. A report of the Labor Committee, made by W. F. Angermyer, contained some very enlightening pointers on the labor situation.

John A. Pierpont reported on the Chamber of Commerce activities during the year.

C. E. Walsh, manager Pennsylvania Railroad purchasing departmen, gave a very enlightening address on the plan of buying materials and supplies of a great railroad, which proved intensely interesting to the assembly.

Mr. Pierpont suggested that the Trade Development Board be submitted to the Chamber of Commerce of U. S. award committee for competition for a medal awarded for meritorious service to the industry.

George I. Ray reported on the finances of the association, showing that the activities of the association have been seriously curtailed for the present because of a lack of funds with which to work and also due to the fact that the secretary's time has been almost exclusively devoted to the production of the Trade Development Book now in the hands of the printer.

Henry Geussenhainer read reports on the Overhead Expense and Uniform Mechanics Lien Law Committees of which his father, Otto Geussenhainer, is chairman, the elder Geussenhainer having found it impossible to attend the convention.

The matter of the 5-year guarantee was definitely disposed of after the report on this was made by Louis Rysdon. Here is how the matter was disposed of: The rider on the Code of Ethics was discarded and the following quotation is to be inserted in the last paragraph of Section 5 of the Code of

Ethics adopted by the association at its Cleveland convention last year:

"It should be the policy of the Sheet Metal Contractor not to hesitate to guarantee the Sheet Metal Work executed by him for a period of five years, providing the work has been specified in accordance with the "Standard Practice of Sheet Metal Work," as published by the National Association of Sheet Metal Contractors of United States, and the contractor has been consulted as to the kind and quality of material to be used."

E. H. Riesmyer gave a very able talk on the warm air furnace industry, stating some of the things which the National Association of Sheet Metal Contractors could do to make conditions better for the warm air furnace installer. He called attention to some of the practices in which manufacturers were indulging that are a detriment to the industry and recommended that pressure be brought to bear to cause their discontinuance.

Air conditioning and forced air heating are in prospect of coming into general use and the contractor should prepare himself to handle the resulting business.

The selection of the next convention city was left to the incoming Board of Directors.

On the plans submitted for bids the actual price was \$2,600. The nearest bid to that was 2,412.70 of Albert J. Wagner, Chicago, who won \$5.00. Geo. F. Carrahan won second prize with a bid of \$2,849.

Jack Stowell, Aurora, Illinois, was on hand and gave a splendid talk on "Better Business and More of It for the Heating Contractor." The talk was inspirational in nature and contained many valuable pointers on how the sheet metal and warm air heating contractor can so arrange his affairs so as to bring more of the profitable business into his shop.

He illustrated by means of charts the application of the Standard Code and also gave a short cut method on the figuring of a furnace job which will assist the contractor to save a great deal of time. The address was listened to intently by the assembly and many questions were asked, indicating the contractors are taking a firm hold on the Standard Code which was not always the case.

The Big Banquet

The banquet was one gorgeous affair. Too much could not be said in praise of the committee and Billy Fingles for the exceptionally splendid work they did.

The local boys thought so much of Billy they presented him with a beautiful silver bowl.

Our outgoing president, Paul Biersach, was shown that his work was greatly appreciated when he was presented with a gold watch. Everybody was getting presents. Jules Gerock, the mighty treasurer, was remembered with a gift and Ed. Merrick received a heap of roses from the Louisville local.

Mary O'Leary was presented with a beautiful beaded bag and Virginia Hutchison received a suit of pajamas.

G. F. Stanton of the Baltimore Copper Mills presented many prizes.

Roy Danzer of Hagerstown, Md., acted as toastmaster and he performed his duties in a manner that was most pleasing and entertaining.

The Baltimore local was given a big ovation for the brilliant manner in which they made the convention visitors welcome and their stay enjoyable.

The Baltimore ladies should be given special mention for the efficient manner in which they cooperated to care for the visiting ladies' entertainment and Billy Fingles is entitled to a standing vote of thanks for his untiring work.

The trade paper editors were praised for their cooperation in helping to make the convention a well attended success.

W. B. Burruss gave the principal talk of the evening. His subject was "Shakespeare as a Salesman," and it was well received.

Friday Morning

Friday morning was given over to committee reports and resolutions and when this was over the folks talked about the wonderful time



HereTheyAre!

Members of the Baltimore Sheet Metal Contractors' Association. To them was entrusted the staging of the Silver Anniversary convention of the National Association of Sheet Metal Contractors. They were the forces back of the scenes that made the wheels go around. It was due to their excellence in planning months ahead and the military precision and skill with which the necessary work was carried out that the convention proved to be the great success it was. off our hats to the Baltimore boys as they pass in review. Their work was well done and they well deserved the plaudits that were heaped upon them as the curtain was rung down on the final day's

Reading left to right-

Top Row: Charles E. Brandt, Wm. F. Zeller, Wm. E. Cotton, Wm. G. Blandford, George Trautner, Joseph L. Hagger.

Middle Row: John J. Cotton, Harry C. Guenther, John E. LaMotte, Robert N. Francis, Wm. Hering, Samuel O. Bevans, Wm, A. Fingles, Jr.

Bottom Row: E. J. Ward, Philip H. Lenderking, Wm. A. Fingles, J. R. Hiss, Charles T. Brandt.

they had and started saying their good-byes.

And the Ladies Fared Well at the Convention

Since the organization of the ladies' auxiliary three years ago in Louisville, the national conventions have been distinguished by the interesting and varied programs prepared to entertain the feminine contingent. And Baltimore extended the far-famed southern hospitality to all—but took especial thought of the ladies. The Baltimore auxiliary, which was formed only a short time before the convention, deserves unstinted praise for the delightful way it filled in the ladies' time with successive pleasur-

able events. The first day a reception and luncheon was held in the hotel, followed by automobile trips to two large industrial plants where the ladies were courteously shown through, and to Fort McHenry, the birthplace of the "Star Spangled Banner." In the evening a snappy dance orchestra, good singers and delicious refreshments featured the informal dance and entertainment given for the entire assemblage. The boat trip up the bay to Annapolis, with luncheon and dinner served on board, and a torrid colored band playing syncopated melodies as well as the Naval Academy dress parade, marked the second day as a memorable occasion.

A sightseeing tour, a luncheon followed by cards, and a sumptuous banquet followed by dancing and cards completed the third day.

On Thursday morning busses were chartered and the women were taken to Lock Raven about 13 miles from Baltimore where the city gets its water supply. The scenery was the most gorgeous. The trip required 3 hours' time and terminated at the May Company, where a luncheon was served.

After the luncheon the entire group of women played bridge. In every respect the women's committee outdid themselves in providing entertainment for the women and are deserving of great credt for the effort they put forth to see that everyone had a good time.

The election of officers resulted as follows:

President, Miss Mary O'Leary, Louisville.

First vice president, Mrs. Ed. Cuddy, St. Louis.

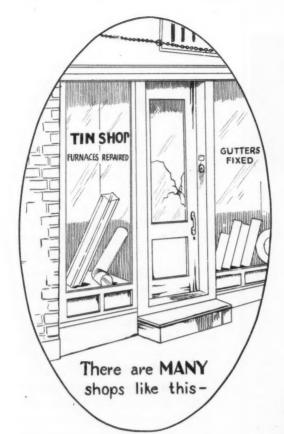
Second vice president, Mrs. J. A. Meier, Evansville, Ind.

Third vice president, Mrs. F. H. Baehr, Baltimore.

Secretary, Miss Dorothy Harp-ring, Louisville.

Treasurer, Miss Irene Fingles, Baltimore.

Directors, Mrs. W. Bowers, San Antonio, and Mrs. Louis Rysdon, Chicago.



What's Around

By BENNETT CHAPPLE

FOR THE

SHEET METAL

M Y subject is purposely blind because one never knows definitely just what is around the corner in life. It is natural to live in a state of expectancy. Hope springs eternal and none of us is so old that we do not yet hold some cherished dream of success or happiness that lies just around the corner. But will we ever turn the corner of our expectation? Will we ever catch up to our opportunity?

"It's a Long Lane That Has No Turning"

The sheet metal business for years has been traveling down a long, long lane and we are all familiar with the old saying: "It's a long lane that has no turning." Sometimes I think this lane of the sheet metal contracting business has been too much in the outskirts of modern business. We have simply got to get out of back alley locations and environment if the sheet metal industry is to take its proper place in the business world. The rustic lane of the

country-side may be beautiful with its overgrown hedges and brambles but it is wholly unfitted to carry the traffic of the busy day.

I submit that the lane of the sheet metal contracting business is so overgrown with old-fashioned customs and notions that the first task before us is a lot of wholesome grubbing. The thoroughfare for efficient business in this day and age must be paved with sound business practices. These include enthusiasm for the business, combined with proper budgeting, cost accounting and sales effort.

I put enthusiasm first for without enthusiasm in our effort the soul
is dead, and the graveyard and not
business is the place for the dead.
Show me a successful sheet metal
contracting business and I'll show
you an enthusiastic, alert organization where every man takes pride
and joy in his work. The man who
is ashamed of the sheet metal business ought to get out of it—the
sooner the better. He is hurting
himself and the business. The man
who doesn't know how to make
money out of the sheet metal busi-

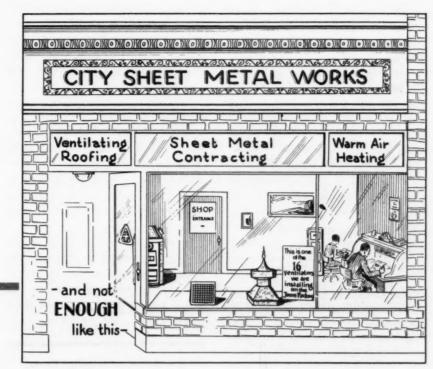
ness ought to get out of it before he is forced out by the inevitable law of destruction.

Psychology tells us it is a wholesome thing to take an honest inventory of ourselves as well as our business. Too often we inventory our business and forget to inventory ourselves. If we do not ask these questions of ourselves, Destiny will ask them of us. I had a dream the other night and in this dream I saw, just around the corner, this figure of Destiny standing. In one hand he held a cudgel, in the other he held a scepter of prosperity. What are you and what are you doing? I asked him boldly. In deep, sepulchral tones he said: "I am Progress in the sheet metal industry. I ask each sheet metal man who comes my way five questions and deal with him accordingly." What are these questions? I asked. Silently he showed them to me and I pass them on to you. Here they are:

Number 1—"Are you proud of your sheet metal business and do you believe in its future for yourself and family?"

That question is an important one.

Address delivered by Mr. Chapple at the Baltimore convention of the National Association of Sheet Metal Contractors, June 3 to 7, 1929.



CONTRACTOR

It should be weighed and answered in the mind and heart of every sheet metal man. If he can not honestly see his way to give an enthusiastic affirmative answer, then he should arrange to get in some other business, even at a sacrifice, for he will be better off in the long run, and the industry, itself, will be better off. Incidentally, judging from the determination in the face of the figure of Destiny, it behooves any man who cannot answer the question with his head upright, to duck and run, because he is certainly going to take an awful beating.

Corner-

the

The second question which Destiny will ask you is: "Are you keeping accurate costs on each job by an efficient cost accounting system, or are you too lazy?"

You see Destiny doesn't mince matters and calls a spade a spade. If you cannot answer this question to your own satisfaction Destiny will strip you of your prosperity, for the cost accounting system is Destiny's way of automatically checking you up and it is as ready to cry out your failure as to pat you on the back.

The third question follows close upon the second: "Are you budgeting your expense?"

Destiny knows that the definite planning of a business and the definite working of that plan is the key to success. Drifting along without charts to steer by brings disaster to any business. If charting expense is necessary in a great business representing hundreds of millions of dollars, how much more necessary is it in a small business. Destiny will charge you dearly for this omission.

The fourth question is thoroughly modern in its concept: "Are you using modern sales effort to go after jobs, or are you too bashful to solicit your share of the sheet metal business?"

Your answer to this question may well take the form of a resolution to the following things:

Organize your work so that you can spend a certain part of your time actually going out and soliciting business.

Call up every customer at least once a year to ask about work already done and suggest new work.

Be eager to serve and show it.

Destiny will smile on such efforts, and the sheet metal contractor who has laid hold of modern sales effort in his business is finding a new joy in his work and a new success in return for his efforts.

The fifth question which Destiny asks is an all inclusive one: "Are you interesting yourself in association work? Are you doing your part or are you riding blind baggage on the efforts of others?"

Here is the test of a real man. We know how necessary it is to work shoulder to shoulder in this day and age and if the sheet metal contracting business is to find its place in the sun, it is only because the individual sheet metal contractors are willing to give as well as get in a cooperative way. And allied to this thought is another-that of taking a part in civic matters and other movements that will widen acquaintance and build prestige in the community you serve. This kind of effort rounds out the personality of the sheet metal contractor and puts a foundation of character under his business.

Having run the gauntlet of his questions satisfactorily, Destiny passes us on to greater achievements.

The long lane which has marked the pathway of sheet metal contracting business for the past decade, is at its turning. Around the corner I can see a broad highway paved with aggressive spirit that will enable the sheet metal contracting business to speed up into a tremendous production and out of this new condition will come success to sheet metal contractors all along the line. Business today is much more complex than ever before. In the early days it was quite enough to learn a trade and having learned the trade a ready market opened up for services because of the natural demand which exceeded the supply. Today we have a highly competitive market. We must not only be good mechanics but we must be good business men. If we are to be good business men we will have to consider our problem from many different angles. In the olden days good business meant good mechanics. Today, it means good mechanics plus good selling. The sheet metal contracting business is no different from any other business in this respect. It has not yet fully developed the selling end of the business. It must do this if it is to succeed in the highly competitive trades of today.

Facts Required as to Market

In order to picture just what our task is, let us go back to the first principles of selling and see how we can fit our own business into it. Selling, first, requires facts regarding the possible market. What is the market for your business? How much territory can you cover? How many people do you serve, and what are their normal sheet metal requirements during a year? Your past business records will give you a basis to work upon. Having put this down for consideration, the next step is a careful analysis of just how and where this business can be increased by the application of selling effort. There are two kinds of sheet metal contractorsthe easy-going kind and the alert—one asleep at the switch, the other eager for information and practical suggestions. The first kind thinks of nothing else but the work in hand and finds no time to plan for the future, giving no thought to making his business better tomorrow. He stands in the way of his own expansion. His own shadow blocks the doorway of progress. The other kind is just as busy taking care of his business today, but he finds time some way to do a bit of planning for tomorrow as well.

What are some of these trends that are beginning to stimulate the sheet metal contracting business? We have talked of them before, but it will not be amiss to review them again. First, the return of sheet

N this article Bennett Chapple, Vice President of the American Rolling Mill Company, gives the sheet metal contractor much food for constructive thought.

He presents five ways in which the sheet metal contractor is enabled to analyze himself and see just why it is that things have not been going as good as they might have with him during the past few years.

This address should be studied thoroughly and its contents mulled over in the mind, so that the reader will get a new idea, a new picture of his relationship with his own industry and with the world at large.

metal cornice work. Evidence lies on every hand that the tide has turned on this very profitable line of sheet metal work and more sheet metal cornices are being built today than any time during the last ten years. It is a growing business. It provides real profit and calls for craftsmanship of a high order, lifting sheet metal work back once more into the atmosphere of culture and design, which it formerly enjoyed.

A recent trade booklet on cornices and marquises, has proven to be one of the most popular pieces of business literature ever issued. It was issued at a cost of several thousand dollars and is designed to give intimate, technical information as to the design and construction of all types of cornices. Both architects and sheet metal contractors have shown their interest and enthusiasm in the subject, and it surely indicates a trend that is unmistakable. Are you fitted to do high class cornice and marquise work? If not, you may miss some of this good business that will be offered you some of these days, and probably sooner than you expect.

The Metal House

Then we have the metal house. I have talked about this to you many times. I believe in it more strongly than ever. It is coming slowly but surely, and when it does come I am afraid the sheet metal contracting business will be on the outside looking in unless it takes more seriously to the job of the contracting end of the business. For instance, we've got to brush up on blue print reading. When I call myself a sheet metal contractor, it means I must have a thorough knowledge of the sheet metal business as well as a general knowledge of the contracting business. The more I know, the better sheet metal contractor I will be.

Conditional Air in Skyscrapers

Another bright star in the firmament of sheet metal contracting business is the development of the use of conditioned air in skyscrapers, theaters and residences. Science is teaching us how to make air serve mankind in ways never dreamed of before. Literally, air is being taken by the nape of the neck and jerked here and pulled there, always with the thought uppermost of the health and comfort of human beings. The warm air furnace is emerging from its lowly estate into one of the most dramatic and revolutionary services to humanity. Much work is being done along this line by the National Warm Air Heating Association, and it behooves every sheet metal contractor to get into step with the program so that he may stand as an expert in his community on the very latest that science has to offer on the subject of air conditioning.

While visiting the Pacific Coast recently I saw installations of controlled air washing and air conditioning units successfully operating, with thermostatically controlled warm air furnaces, in modest homes costing \$8,000, as well as more expensive ones costing \$40,000. Can you imagine the duct work in a modern \$40,000 home? It was one of the most beautiful jobs I ever saw.

The field is unlimited, and as the business grows those shops which can best take care of the new jobs with scientific understanding, putting into their contribution definite sales and engineering effort, will eventually find a tremendous growing market for their services. This is something for every sheet metal man to get truly excited about. The furnace business in the past has been the bread and butter of sheet metal contracting. It promises much even though the bread has been growing thinner and the butter growing scarcer each year so far as profit is concerned.

However, with the scientific world taking up the subject of conditioned air, a Moses has come to lead furnace manufacturers and sheet metal men alike out of the bullrushes.

Roofing of Metal

One more thing has come to my attention recently that has stimulated my imagination in the future possibilities of the sheet metal contracting business. It is that of a new type roofing whereby roofdecks of wood, concrete and gypsum are being replaced by metal. Most alert sheet metal shops have already developed an important roofing department, but the trouble has been that they start with the tar pot instead of the roof itself. The tremendous strides that have recently been made in metal roofdecks, fabricated of 18 and 20 gage sheets -a logical material for the sheet metal man to erect and install-challenges every sheet metal contractor today. With this metal roofdeck goes the installation of insulation, as well as other profit bearing items. I saw a job recently put on by a sheet metal contractor. If he had

been content to start with the tar pail his profit would have been \$400 but by doing the whole job his profit was \$1,200. Here are the approximate figures based on 10 per cent profit on each item: Installation of metal roof-

 deck
 \$6,000

 Insulation
 2,000

 Roofing
 4,000

This is the approximate proportion of cost on jobs of this kind. Why take only \$400 profit on a job when by putting on the entire roof you could make \$1,200 profit? The sheet metal man who is smart enough to get into this roofdeck business at the start will have reason to congratulate himself later on. It has been estimated that 20,000 tons of this roofdeck metal will be laid this year. How much are you going to do in your town and vicinity? I leave the question for your consideration.

Project Business 3 Months Ahead

As a final word, may I suggest that every sheet metal man attempt to project his business at least three months ahead; weigh its possibilities and profit; set a goal and then work toward that goal. Drifting along from day to day is the most wasteful thing that can happen to any business. As we project our effort, it automatically sets the stage with a new determination for accomplishment, and out of this new determination will come success.

The future of the sheet metal contracting business is indeed bright. Tremendous things are converging for the benefit of the sheet metal contractor. The development of the continuous mill for the rolling of sheets means that sheet production has at last been taken off the backs of men and put on the shoulders of swift tireless machines. It means a tremendous output which must lead to a tremendous development for new uses of sheets in building and construction.

Just around the corner is the new day, but to enter the new day the sheet metal contractor must salute the dawn with a new faith in his business, with a new pledge of service, and a new vision of the sheet metal contracting opportunities.

Are you ready! On your mark! Go! The race is to the swift!

Bennett Chapple SAYS—

DESTINY asks these five questions of YOU—

- "Are you proud of your sheet metal business and do you believe in its future for yourself and family?"
- 2 "Are you keeping accurate costs on each job by an efficient cost accounting system, or are you too lazy?"
- 3 "Are you budgeting your expense?"
- 4 "Are you using modern sales effort to go after jobs, or are you too bashful to solicit your share of the sheet metal business?"
- 4 "Are you interesting yourself in association work?

 Are you doing your part or are you riding blind baggage on the efforts of others?"

Convention Gets Good News About THE TRADE DEVELOPMENT BOOK

By George Harms, General Chairman of the Trade Development Committee

FINISHING my report in Cleveland last year, I stated that I would not go to the Baltimore convention unless the committee was prepared to make a favorable report. I furthermore stated that if the book was completed I would certainly celebrate at that time. The fact that I am here demonstrates that the report which we have to offer is quite satisfactory. However, because I am not celebrating proves that the book is not yet printed.

How Work Is Progressing

At Cleveland it was mentioned that it would require at least \$5,000 to prepare the work, ready for the printer, and it was the belief that the advance sale of books would be enough to bring in this amount so the work could progress satisfactorily.

Up to that time two draftsmen had been working part time, and although they were quite diligent, every drawing required just so much time, and it was soon apparent that additional help would be required to finish the work in one year. We, therefore, engaged other draftsmen; at times we had eight men working.

To pay these bills required in excess of \$1,000 per month—and as the sale of books failed to materialize, and as the bank refused to loan more than \$3,000 which we already had, it was necessary to look elsewhere for money.

Your treasurer, Julius Gerock, suggested that each of the directors loan the association \$300. Personally I did not favor the proposition, as I feared for the results, knowing that there were some who probably

When
GEORGE HARMS
said—
"Boys, the BOOK
is being printed"
the convention made
much "WHOOPEE"

could not spare this amount of money—and there were others who would not.

Although the loan at the bank was endorsed by such capitalists as your president, Paul Biersach, and your treasurer, Julius Gerock, to which I also added my signature, they would not allow us any further credit. The loan from the directors was not pressed, as it was impractical.

The bills had to be paid and arrangements for money must be made. It was either continue with the work or lose all we had already put in, and probably, at the same time, disrupt our association.

About this time arrangements were made to borrow all the money that we might require and then everybody was happy. But instead of taking \$5,000, we have already

Complete Report
as Read at the
National Association
Convention
at Baltimore

spent in excess of \$10,000 in the past year.

Where the Book Is Being Printed

On May 1 we contracted with the Excelsior Printing Company of Chicago for the printing of the book, and with the Pittsburgh Engraving Company to make the zinc etchings and half-tones. The total cost of printing and etchings will be about \$12,000.

When completed the association will have \$54,000 in this proposition. If you add to this the time given by the members, many of whom have attended committee meetings and paid their own railroad fare, hotel bills, etc., the grand total would be probably double the above.

Now, to get back to my original statement that I would not have come to this meeting unless I could make a satisfactory report. The drawings are completed, many of the zinc etchings and half-tones are done, and the printers have started on the job.

What Work Production of Book Entailed

The text has been a great problem, as it was necessary to write and rewrite it, to have it checked and rechecked. Every letter, all the punctuation, etc., had to be carefully scrutinized so that it would properly fit the drawings. Spelling and grammar required a great deal of thought and many corrections. All this has been taken care of in the national office. The printers set this up in galley form and it is again sent to Pittsburgh for proof reading and set up into page form.

The book, when completed, will

probably have nine hundred pages, and I am very pleased that I can now show you a dummy which will be about the size of the book—and a few drawings I have here will show you what the cover is like.

No doubt some are saying: "This has been told us time and again and we will probably hear the same story a year from now." I am quite sure that this is the last report I will make on the progress of the book, as the printers have assured us that they will be done with their work about August 15th. You realize that is about two and one-half months from now.

How to Put to Work

I am very confident that the book, when done, will please you. I am sure it will be the means of more general use of sheet metal. But it must not remain in the office, nor the association vaults. Results can only be obtained through a wide-spread distribution of the book to architects, building contractors, and into every sheet metal shop.

In work of this nature there are always some who work harder than others, and the success of a venture depends largely on the work done by a few. It is not my intention to pick out or praise any members of the committeee, as they have all done their part of the work. The book, when completed, has been prepared by the National Association of Sheet Metal Contractors through the work of its Trade Development Committee, and I would not mention any one of these particularly.

Praise for Workers

Two men in this room, however, are entitled to special mention—and I want to take this opportunity to thank them personally for the great amount of work they have done, and I believe that the association should also extend to them a rising vote of thanks.

The first is our little friend, Edw. Scott (Scottie). With his knowledge of printing and publishing he has been a constant adviser. He has gathered much of the data. He has attended every meeting he was

called to. His help in every way was without one penny of expense to the association. He has spent his own money for railroad fare in attending the meetings—in fact, all his services have been gratis. Without "Scottie" and his encouragement I fear we might have failed miserably.

The other man is your secretary, Mr. Markle. Mr. Markle and his assistants in the office have worked night and day in checking drawings, reading and correcting the text, and in general preparing the work for the printers. They did all this in addition to carrying on the regular routine of the office, and also editing our *National Journal*. Although Mr. Markle is paid for his services as secretary and editor, he has given the association much more than he has been paid for.

In Conclusion

As another will speak on this subject, I will close. But before doing so I want to make a few personal remarks.

When you elected me as the general chairman of this committee I did not fully realize what you were doing for me. Now that the work is about completed, and I can look back and remember the many kind words and encouragements offered me by the members of this association, and the industry in general, my acquaintance with the sheet metal contractors and their friendship to me has multiplied many times.

The education that I have personally received through this work is worth very much to me. It has added to my knowledge of the sheet metal business. I believe it has increased my ability as a business man. Although I have spent much time, giving the matter a great deal of thought, and also spent some money, I have been fully repaid for all that I have put into it.

I am very glad, therefore, that you selected me as the general chairman of the work—and I will close my report with my sincere thanks.

These Firms Exhibited at Oil-O-Matic Convention

American Foundry and Furnace Co., Bloomington, Ill.

R. C. Kash exhibited "Juneair" steel warm air heating system, square casing, fitted cold air intake and Oil-O-Matic unit.

Kruse Company, Indianapolis, Ind.

Bob Kruse was showing his new square cased Oil Burning Steel furnace with Reed Air Filter equipment and Oil-O-Matic installation. The Meyer Furnace Co., Peoria, Ill.

Frank Mehrings, Jack Sauer and J. F. Flavelle were in charge of the Weir Steel furnace exhibit. An Oil-O-Matic installation was shown. Cole Mfg. Co., Chicago, Ill.

Steel furnace with Oil-O-Matic installation.

P. H. Ma Girl Fdy. Co., Bloomington, Ill.

The firm showed their horizontal furnace with Oil-O-Matic installation.

Lennox Furnace Co., Marshall-town, Iowa.

Steel furnace with Oil-O-Matic installation.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

The Draft-A-Juster Corp., Chicago, Ill.

The Hays Institute, Chicago, Ill.

Penn Electric Switch Co., Des
Moines, Iowa.

Hays Corporation, Michigan City. Ind.

The Mercoid Corporation, Chicago,

Art Paint Porter Co., Chicago, Ill. Fuel Oil (Publication), New York, N. Y.

Oil Heat (Publication) New York, N. Y.

Barry Furnace Company Moves to Larger Quarters

The Barry Furnace Company of Hamilton, Ohio, has moved to 202-208 North B Street, where they have twice the floor space of their old location.

Mr. F. W. Barry, the president of the company, states that larger stocks of furnaces and furnace supplies will be carried, making immediate shipments possible.

BIG OPPORTUNITY IN SCHOOL HOUSE HEATING

By O. W. KOTHE

IN SOME school house heating jobs from one to six or more warm air furnaces had been installed for the heating of the air. Some of these jobs have been done very creditably.

In our case we have to provide means for 17 warm air pipes; the air is to be heated by the coils passing through an air washer and being driven by fan. Because of lim-

ited space the fan room has been placed under the stairs, and the ducts leading from the air washer and coils are made narrow and deep. In this case a measure around 8 inches by 30 inches to carry an area of 240 square inches. These pipes are then transformed into something that is more suitable and shallow so as not to interfere with the height of ceiling before

Sheet metal men who can take care of such systems can make splendid opportunities for themselves if they will go after it right. The matter of designing and running of pipe is in itself quite a problem with each job, but what is still more important is to know how to figure the heat loss and how much heat must be put into the air coming in from outside so as to insure proper functioning. This is what we call fan heating and ventilating engineering.

entering to the riser flues.

The same thing can be said in a way about warm air furnaces, but that does not cover all the heating knowledge and therefore it is only a special section or branch of the main parent stem called heating and

ventilating. There are any number of sheet metal workers keenly interested in this sort of work. When these folks learn the necessity of such knowledge, they are then on the road to progress and advancement.

Friction Requirement Must Be Taken Into Account

It is also important to know how

In this article Mr. Kothe has endeavored to call the attention of the sheet metal contractor to the fact that a large amount of sheet metal work is to be had in the heating and ventilating of school house and church buildings.

In order to get this work, however, Mr. Kothe has shown that it is absolutely necessary that the sheet metal contractor has a thorough knowledge of the methods of figuring heat losses, friction in ducts and warm air heating unit capacities.

to figure the friction in the different pipes. Where this is not done, a system of dampers is always necessary and quite often these are not regulated, which gives some rooms the preference over others. Automatic control is another important item a heating man should understand.

Demand Increasing for Ventilating Engineers

Heating and ventilating is a permanent business. The public is becoming more interested in it every year. So many new buildings are being erected that must have heat and old systems must be rebuilt or torn out and new systems put in. This, together with the increase in population, requires more expert

heating men.

Folks who do not know anything about heat loss can easily walk into a room, look around, and say this room requires such and such a size pipe, and then go into the next room and do the same thing over. At the end they do the same sort of guessing by saying such and such a size heater is sufficient. In such a practice if everything was figured

out in mathematical order, the system may be found to be half large enough, but folks who base their wisdom on practical judgment do not know the difference. It is the public that pays, and the more the public becomes disgusted with such guess work the quicker they are turned into substitute fi e l d s. such as steam and water heating, or other forms, as they may be devel-

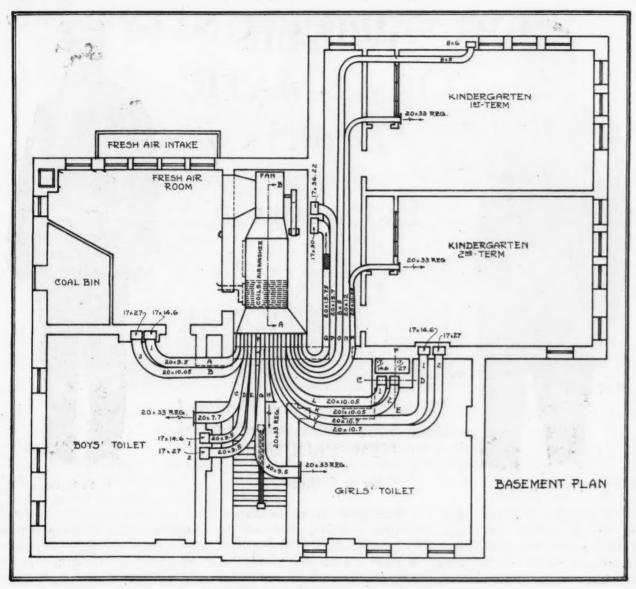
oped.

How Much Groceries Will Your Dollar Buy?

Assuming that the 1913 dollar was worth 100 cents in purchasing power, the dollar of today, in relation to the general cost of living, is now worth approximately 58.1 cents.

You will be glad to know that the food dollar comes closer to the 1913 dollar in purchasing power than the dollar expended for any other necessity, being worth 64.1 cents.

Next to that comes the rent dollar, which is worth 62.4 cents, followed by the clothing dollar, worth 61.4 cents.



School House Warm Air Heating System

Liquid Porcelain Patches Chipped Enamel

Technical Products Company, 116 South Sheridan Avenue, Pittsburgh, Pennsylvania, manufacturers of Insa-Lute (Liquid Porcelain)

PATCH: ONAME

assembling and insulating cements announce a new material Patch-O-Namel for patching chipped porcelain enamel on Refrigerators, stoves, bath tubs, etc. This material is made from practically the same ingredients as the porcelain, but has the advantage of setting hard without the use of ovens or fire.

Although Patch-O-Namel does not give the glazed surface of china, say the manufacturers, it may be cleaned like tile, as it is acidproof and does not soften or scratch like paint. Application is simple. Specimens and further information can be had from the company.

New Automatic Draft Regulator Creates Interest

The Staley Automatic Draft Regulator illustrated below is designed to maintain uniform draft at all times.



It is claimed that the pull of the draft in the flue causes it to open and close automatically holding draft to desired degree.

The manufacturers state that it is a fuel saver, that it prevents overfiring, and reduces hazard of flue fires.

It is claimed that the Staley Automatic Draft Regular has created a great deal of favorable comment.

Dealers desiring full information should address the manufacturers, Gray Brothers, Inc., Plano, Illinois.

Akrat Ventilators, Inc., in New Quarters

E. H. Petsche of Akrat Ventilators, Inc., ventilating engineers, announces that the offices of this company are now located at 213 W. Schiller Street, Chicago, Illinois, which location brings together the offices and manufacturing plant.

The company specializes in building siphonage ventilators.

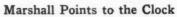


W. W. Williams

Williams OIL-O-MATIC Dealers Meet at Bloomington for FIFTH INTERNATIONAL CONVENTION

Throng of Over Three Thousand Hear Sales Talks and Examine NEW PRODUCTS

By J. F. Johnson



After requesting everybody to rise and speak to their neighbors, which proved a great get-acquainted idea, Mr. Marshall resumed charge of the meeting and gave a brief review of the history of the Oil-O-Matic organization. He recounted the inventing, making and marketing of the first Oil-O-Matics but ten short years ago.

Following the successful advent of the first oil burners production on a larger scale was effected on the burner which became known as the Model G—shortly followed by a much improved type of burner—the present Model J. Still greater success came and increased production and larger dealer outlets.

Mr. Marshall pointed out, however, that their investigation, dealer demand and public demand had forcibly revealed that there is need for an Oil-O-Matic as good as the Model J but smaller and less costly and that the factory had perfected such an oil burner and—he pointed to the clock—the zero hour which all had waited for had arrived and promptly at 11:27, the advertised hour, the new Oil-O-Matic Junior was revealed to the audience, coming forth out of a big paper mache pot on the stage.

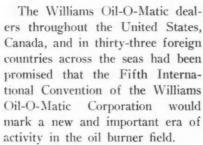
The entire assemblage arose and applauded the announcement and unveiling of the new burner.

The meetings throughout the convention were enlivened by music by an orchestra, and songs by the assembly.

The peppy New York delegation decked out in orange hats and ties, white flannel trousers and malacha canes, occupied prominent space in the audience and they could be heard singing the Oil-O-Matic parody of East Side, West Side, All Around the Town, to open the afternoon session.

Conventionites Meet the Inventor of Williams Oil-O-Matic

Mr. W. W. Williams, vice-president and secretary of the Oil-O-Matic Heating Corporation, and son of C. U. Williams, the president of the corporation, was introduced by



Over three thousand of these dealers came to the enlarged factory at Bloomington, Illinois, to see the promise fulfilled during the two-day convention June 3rd and 4th.

And it is a pleasure to twist about a familiar phrase by saying that what this convention *had* in numbers it also had in enthusiasm, interest and attendance at *all* sessions.

R. D. Marshall of the Home Office, who seems to lack an official title but whose name readily suggests a very fitting one; gave the address of welcome.

Hon. Ben H. Rhodes, Mayor of Bloomington, and H. K. Hablit, president of the Bloomington Association of Commerce, also gave a short address of welcome.



C. U. Williams



Mr. Marshall as the inventor of the Williams Oil-O-Matic and other Williams products.

Mr. Williams received an enthusiastic greeting and responded by complimenting the dealer organization for their cooperation.

"The factory can't do it all," he stated, and said he was happy to participate in the presenting of the New Junior Oil-O-Matic and other new products which his associates and he had labored long to offer to the dealer organization to round out the line.

Mr. C. U. Williams, president of the organization, was the next speaker, and as he advanced to the rostrum the curtain was drawn aside revealing the display of the entire line of Williams products.

Mr. Williams spoke briefly lauding the successful engineering results of Walter Williams and his associates in the manufacturing and engineering departments.

He outlined the months of hard preparatory work necessary to bring the new products to the point where they could be shown to the dealer organization.

The new burner, he stated, would be in production in time for the heating season

New Dist-O-Stoves

M. E. Ticen, who is well known in the stove and warm air furnace field, was introduced as the manager of the new Dist-O-Stove Department.

Mr. Ticen gave a market analysis using charts which revealed that a big market exists for Dist-O-Stoves which he gave as the reason for bringing out this new line of oil heating stoves.

The charts showed that a market survey proved that fifty-one per cent of the homes of this country are still heated by stoves. The Dist-O-Stove line, he stated, covers the entire range of needs for stove heated homes

"An analysis of the heating equipment used on farms shows that based on an average for the entire country, 79.8 per cent use stove heat, 10.4 per cent use warm air furnaces and 9.8 per cent fireplaces," Mr. Ticen said. "The average life of a stove on the farm," he went on, "is fifteen years. Ten million heating stoves are replaced every fifteen years on farms alone, according to the research data."

7th Inning Stretch

Mr. Marshall called for a good old fashioned stretch and a song or two to relieve the strain.

Other speakers on the Monday afternoon program were C. E. Stedman, vice-president and general manager, Celotex Corporation of Chicago, who spoke on "Insulation as a Burner Sales Help." He stressed the value to home owners of proper insulation to economize on heating cost. He pointed out that often the heating man can guard against undue criticism of his or his equipment's heating ability by seeing to it that the home he is asked to heat is properly insulated.

W. J. Brevitt, sales manager, William Oil-O-Matic Heating Corporation, spoke on "Products and Prospects."

Mr. Brevitt told how a few years ago modernizing the office was the topic of the day and now modernizing the home is the big thing.

He pointed out by presenting convincing figures that prospects were plentiful. He stressed the necessity for high grade sales rooms, consistent use of advertising helps and regular use of newspaper advertising. A larger and more efficient sales force, he said, was the dealers' big need today.

W. K. Braasch, president Salesmanship Foundation, Incorporated, gave a peppy, convincing and entertaining talk on "The Nine Steps in Making a Williams Product Sale."

"The Importance of Draft Regulators" was the topic of J. L. Breeze, Jr. Mr. Breeze called attention to the fact that oil burners are called on to operate in warm air furnaces and boilers which were designed for coal burning and, therefore, draft conditions must be changed or regulated in order that efficient service may be rendered.

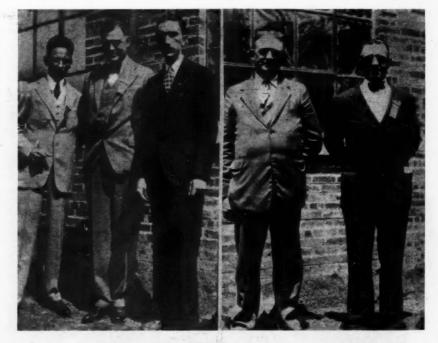
Following the speakers' program, the conventionites were driven about the city to view the homes in which Williams Oil-O-Matics or Williams Ice-O-Matics were installed.

Tuesday Morning

John P. Roche, president of Roche Advertising Company, spoke on Williams Oil-O-Matic advertising, giving the dealers the picture of what was being done to help them sell Oil-O-Matic. He told of the necessity for the dealer to do local newspaper advertising to connect up with the large national program in order to derive the most benefit from his valuable franchise.

Homer Linn of the American Radiator Company gave a good illustration of the difference between a salesman and an order taker.

C. W. Plass, Oil-O-Matic dealer



Bob Kruse, M. E. Ticen, R. C. Kash, Jack Sauer and J. F. Flavelle

business, he claims, is responsible for lack of greater profits in the business.

Tuesday Afternoon

The Tuesday afternoon session was marked by the presentation of a two-act play by theatrical talent entitled, "Man Power—a Drama of Dealer Procedure." The first act showed a William Oil-O-Matic dealer's establishment and his help as

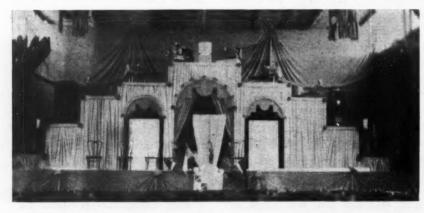
The presentation of the rehearsal and then the actual broadcast program of a Williams Oil-O-Matic radio program as it is enacted in the studio, proved entertaining and instructive.

R. D. Marshall, the dynamo who refused to stop working in spite of an accident which badly interfered with his activities, wound up his program with "Eggsactly"—a presentation showing why some territories produce sales and profits while some do not.

Two immense paper mache eggs and two men with paper mache chicken costumes were used in making the demonstrations. As Mr. Marshall said, "We can put good products, good advertising, sales helps, etc., into two identical territories"—a card representing each subject was deposited in either egg.

One bird stayed with the egg; the other left the nest occasionally, and when the insides of the eggs or "territories" were looked into it was found that the one was empty while the other hatched forth the gold.

This closed the business session and everybody rushed for their hotel to clean up, rest and return for the banquet which was a real whoopee party with lots of fun and entertaining talks by J. H. Hudson and A. R. Williams.



The Stage in the Convention Hall Showing the Display of Williams Products

of Kansas City, gave a detailed and interesting paper on Profits, Ways and Means. He dwelt on the necessity for uniform billing as the only means of straightening out the line which now is in the red seven and a half months of the year and at its high water mark in October. The seasonable billing of the oil burner

they should not be or act, and the second act with action taking place three months later after things had been ironed out a bit and more Man Power put on the job.

This play told more convincingly the necessity for burners and sales administration on the part of the dealer than any dozen talks.

Warm Air Heating ADVERTISEMENT THAT SPEAKS THE PUBLIC'S LANGUAGE

For some time now it has been apparent to warm air furnace installers of the better class that a great deal of modernizing was necessary in the advertising being done by them. They have for the most part come to a full realization that ordinary folks are too busy with their own affairs to be interested in the mechanical details of a warm air heating plant for instance, but that they are more vitally concerned about the things that will give them greater comfort, greater ease, more convenience than they ever had before.

Some of the more wide awake furnace manufacturers have sensed this change and have not been slow to alter their own advertising policies, revamping them to meet this new requirement.

A Bed-Time Store upon a dimerior to be the construction of the construction.

Among the foremost of these is the older ing. One ing. On

The theme of this series is domestic felicity, graphically portrayed in ten different and distinct ways. And although there is a direct tieup between the company product and the advertising, it appears to be almost entirely inadvertant.

The illustrations are such that each one portrays a domestic scene that could be duplicated in almost any household in any city. There is nothing stilted about it. No garrish plastering of the company's name all over it, but plenty of space for the dealer's name. The reading matter accompanying the illustrations is up to the minute in every respect.

This series is the Meyer Furnace Company's contribution to the

campaign for better advertising in the warm air heating industry. It is well done and will go a long way toward creating in the public mind a better appreciation of the merit of warm air heating.

Warm air furnace installers who are interested in securing the use of newspaper advertising copy that is heating in the best possible manner to the customer of today. And this you should know.

The warm air heating contractor who does not advertise is out of the profit picture today. No longer can he afford to wait for customers to come to him. This is a day of merchandising and selling and this the warm air heating man in general lacks. Such advertising help as this should be taken advantage of by dealers who want to put the better warm air heating message across to folks in their territory.

WEIR-AMERICA'S SUPREME WARM AIR FURNACE

A Bed-Time Stores:

WHEN THIS BABY IS A GROWN-UF MANTHE SAME
THE THIS BABY IS A GROWN-UF MANTHE SAME
WITH BABIES OF HIS OWN, THE SAME
WITH BABIES OF HIS OWN, THE SAME
WITH PROBABLY BE STILL
WEIR FURNACE THAT
WEIR FURNACE
ON THE JOB AND GOING STRONG.

"ON THE JOB AND GOING STRONG."

Illustration Shows
Three of the Series
of Weir Dealer
Newspaper Advertisements

bound to pull results from them should take advantage of this opportunity and write to the Meyer Furnace Company for the "29" series of newspaper advertising layouts.

In addition to this you should also ask for the booklet on "If You Could Color the Air in Your Home." For even if you do not care to use the material as it comes to you, it contains the fundamental idea on how to advertise warm air

VEIR—AMERICA'S SUPREME WARM AIR FURNACE

"And the house is so much easier to keep clean with this WEIR Furnace"

(for one, it is made of med and all same beatwished and riversed on make them. They like the final eccumeny—which may be not wished and of severight.

Indi it has double cosing age to keep one all lines med dust and dise-wat set, that's what Dak the set of the set

[This Space for Dealer's Signature]

Elected to Presidency of Ryerson's

M. EDWARD L. RYERSON, JR., has been elected President of Joseph T. Ryerson and Son, Inc., succeeding Mr. Joseph T. Ryerson.

Mr. Joseph T. Ryerson will remain a member of the Board and continue to hold the office of Treasurer.

Mr. Edward L. Ryerson, Jr., has had twenty years' experience in the operating and marketing divisions of the business and brings a wealth of practical experience to the post of President.

Coming to Ryerson Company in 1909, he began in the plant's operating department, and held the position of

Works Manager for several years

Prior to the war. Mr. Ryerson entered the service early in the war with the Aircraft Production Board in Washington and was later captain in the Air Service Division of the Signal Corps. He was elected Vice President of the firm in 1922 and Vice President and General Manager in 1928.

Mr. Edward L. Ryerson, Jr., was graduated from Sheffield Scientific School (Yale) in 1908 and later attended the Massachusetts Institute of Technology. He is a member of the Board of Trustees of the University of Chicago and director of the Northern Trust Company and the Quaker Oats Company. He is also President of the Chicago Council of Social Agencies and active in many other civic enterprises. He is a member of the Chicago, Commercial, University, Union League, Shore Acres and other clubs.

The Ryerson Company is in its 87th year as an independent steel ware-housing organization, furnishing a complete line of steel products for industrial and universal consumption.



Reminding Them Early Is Mehrings' Idea

Frank E. Mehrings, general manager of The Meyer Furnace Company, Peoria, Illinois, is a live wire

Good Morning! Here is a Herald Tribune with our compliments and Best Wishes for your pleasure at this convention of the National Association of Sheet Metal Contractors. The Mever Furnace Company urers of the WEIR Furn F. Meyer & Bro. Co.,

and a great believer in good adver-

The "Handy" Pipe People

Peoria . . Illinois

The accompanying illustration is a reproduction of the sticker which was attached to the copy of the New York Herald-Tribune delivered each morning to every one attending the National Sheet Metal Contractors' convention at Baltimore.

The first thing in the morning the hotel guest reaches for his paper and by using this sticker idea the Meyer Furnace Company and the F. Meyer and Brother Company said "Good Morning" to each delegate, reminding them early that they were on the

WHO'S WHO, WHERE?

St. Paul Minn.—The Metropolitan Roofing & Cornice Works, 372 Rice street, has the roofing contract for the store building of the Lampert Investment Co.

MISSOULA, MONT.-John Pope, has the warm air heating contract for residence of Senator John Campbell.

WATERLOO, IA.—The Waterloo & Manufacturing Co., corner Miles & Commercial streets, has the sheet metal contract for Chas. M. Woods store build-

Monterey, Cal.—The Simpson Plumbing Co. has the sheet metal and plumbing contract for packing plant of Customhouse Packing Co.

SAN FRANCISCO, CAL.—The Forderer Cornice Works, 260 Portrero avenue, has the sheet metal contract for canning plant of F. E. Booth Co., in Pittsburg.

Los Angeles, Cal.—The Forderer Cornice Works, W. M. Garland Bldg.,

has the hollow metal door contract for store building of Sears, Roebuck & Co.

The Main Cornice Works, 620 S. Main street, has been awarded the sheet metal and ventilating contract for the Masonic Clubhouse.

The Pemberton Heating Co., 105 S. May street, has contract for heating and ventilating system for University of Southern California memorial building.

Emil Brown, 300 East 9th street, has the sheet metal contract for new tory building of Hoffman Candy Co.

The Arcade Cornice Works has been incorporated in Los Angeles, Cal., with a capital stock of \$10,000, by T. F. Bazzeni, of Lennox, Roland Bazzeni, and Franklin B. Hansen of Los Angeles

FORT WORTH, TEX.—The Fort Worth Sheet Metal & Roofing Co., 914 Commerce street, has the contract for sheet metal work on theater and office build-ing of Fort Worth Properties Corp.

Washington, D. C.—The Wolfsteiner Co., 1315 W. St. S. W., has the sheet metal contract for St. Joseph's Seminary building in that city.

Here's Consumer Literature in Story Form That Makes a Hit

The accompanying illustration shows the front cover of an eight page booklet which drives home the quality idea in warm air heating installations in a mystery story form which the prospect can't fail to read through to the end.



Right now mystery stories are very popular and the dealer who sends out this booklet to his prospect list will find it good advertisingspace being provided for the local dealer's name.

The booklet is being supplied to the trade by the Chicago Furnace Supply Company, 1278-82 Clybourn Avenue, Chicago, Illinois, who will send a supply to dealers on request.

Your mailing pieces on warm air heating should go out now.

OSBORN'S ALL-STEEL

CLOTHES CHUTE DOOR

Should be of interest to our Architectural friends as well as to our trade for it is easy to install—costs no more and is better in every way!



WHEN OPEN

Better in appearance. Smoother, takes a better finish. Cannot sag nor warp. Nonbreakable. No splinters—No ridges to hold dust-hence more sanitary. It can be used for: Switch-Box Door - Medicine Cabinet Door-Sink Cabinet Door-Access Doors to Flues-Plumbing Fixtures and Radiator Shut-offs.

Construction

High quality plating steel-accurate die stamping-rigid and tight closing. Ornamental knob. Deep flanged frame with holes punched for attaching to metal box or furring strip. Convex border hides rough plaster, etc. Spring catch. It can be furnished with self-closing spring, when so ordered.

LIST PRICES

Door Opening Size	Extreme Overall Dimensions	Prime Coat	White Baked Iaban	Electroplated Nickel
7 x 10	10 x 13	\$3.25	\$3.75	\$4.75
9 x 12	12 x 15	3.50	4.00	5.00
	WRITE	FOR DISCO	UNT	

Our Standard Cartons contain six doors of one size and finish. Standard finishes may be assorted if desired.



WHEN CLOSED

BUFFALO

PRICES ON APPLICATION FOR SPECIAL FINISHES MADE TO ORDER

THE J. M. & L. A. SBORN CLEVELAND

DETROIT

"EVERYTHING USED IN SHEET METAL WORK"

Ask for New Sample Pkg. (B) with Monel Metal-Nickel Zinc-Nickeled Steel and Aluminum Samples

Disc of Metal Perforations Handy for Sheet Metal Contractor

The sheet metal contractor of today is more or less of a doctor of all work; that is, it is, or should be, his business to analyze processes of manufacture and determine whether or not his product and service can be of value to the factory owner in reducing labor or saving time, etc.

That being the case, he is going to find demands made upon him for many different kinds of perforated materials and devices of one kind

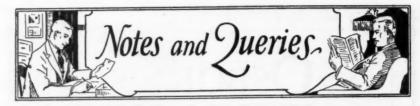


or another. He must be in a position, therefore, to be able to show the customer what the latter is going to get or he must be able to foretell whether a certain type of perforation will be suitable for the work in hand.

The Erdle Perforating Company, 171 York Street, Rochester, New York, makers of perforated metal of all kinds, have perfected a metal disc 63/8 inches in diameter in which are made 31 of the most commonly used perforations. Each type of perforation is numbered, making it very easy for the contractor to determine just what the customer wants and to designate accurately to the perforator so as to avoid errors.

The disc is a handy appliance to have in the shop that every sheet metal contractor should secure. They will be sent free upon written request to the company.

The company makes perforated metal for agricultural machinery, grilles or radiator enclosures, metal for heating, machinery guard material, strainers, etc.



"LeadClad" Sheets

From Parkside Sheet Metal Works, Second and Chestnut Streets, Kewanee, Illinois.

We should like to know who makes "LeadClad" sheets.

Ans.—Wheeling Metal and Manufacturing Company, Wheeling, West Virginia.

Tar Kettles

From F. M. Flynn, Faribault, Minnesota.

Please give me the names of a few firms who make tar kettles to be used in putting tar and gravel on roofs.

Ans.—Berger Brothers Company, 237 Arch Street, Philadelphia, Pennsylvania; B. K. Lyman & Company, 2107 West Lake Street, Chicago, Illinois, and Littleford Brothers, 443 East Pearl Street, Cincinnati, Ohio.

Roofers' Felt
From Schidlofski Brothers, 1408
Fourth Avenue, Moline, Illinois.

Kindly let us know where we may buy felt which is placed under tin roofs to deaden the sound of the rain.

Ans.—Beckman-Dawson Roofing Company, 223 Jackson Boulevard; H. F. Watson Company, 5331 South Western Avenue, and Bird and Son, Inc., 1472 West 76th Street; all of Chicago.

Kerosene Burner for Cook Stove From W. H. Gandy, Temple, Oklahoma.

Who makes a good oil burner for use in the firebox of a cook stove or range?

Ans.—Gloria Light Company, 112 North May Street, Chicago.

Second Hand Tools
From C. E. Payne, 152 Park Drive, Allegan, Michigan.

Will you please tell me where I can secure some second hand machinery as follows: One set of rolls not less than 31 nor more than 37 inches, one medium sized turning machine, one smoke pipe folder 31 inches or longer, one crimper and beader?

Ans.—Maplewood M a c h i nery Company, 2638 Fullerton Avenue, and Interstate Machinery Company, 100 South Jefferson Street; both of Chicago.

Cast Iron Smoke Pipe From George R. Baker, 414 North Second Avenue, Alpena, Michigan.

Please inform me who makes cast iron smoke pipe.

Ans.—Waterloo Register Company, Waterloo, Iowa, and Fault-

How Would YOU Handle This Heating Problem?

To AMERICAN ARTISAN:

What size flue will be required for heating plant to heat satisfactorily a one room school building, 24x36 feet with 12 foot ceiling? Will it be better to build a double flue with one side for foul air? Also, let us know size of opening in wall for fresh air intake. The walls will be made of masonry.

Thanking you for the above information,

Very truly yours,

SUBSCRIBER.

less Castings Company, Brazil, Indiana.

Five Car Steel Garages

From R. L. Spellerberg and Son, 343 West Eighth Street, Dubuque, Iowa. Can you tell us who makes five-

car all steel garages?

Ans.—The Thomas and Armstrong Company, London, Ohio; Trachte Brothers Company, Madison, Wisconsin; Martin Steel Products Company, Mansfield, Ohio, and The Stefco Steel Company, Michigan City, Indiana.

Cast Iron Conductor Extensions
From W. J. Vierck & Son, East State
at North First Street, Rockford, Illinois.

Will you kindly let me know where in Chicago I can get cast iron conductor extensions as are usually used on the lower end of the conductor pipes leading from the eaves troughs?

Ans.—Friedley-Voshardt Company, 733 South Halsted Street.

MASHALLTOWN

Rotary Throatless Shears

ONLY three moving Parts—takes sheets of unlimited width and up to 3/2 inch gauge.

Cuts curves in any direction—straight—circular or any irregular shape desired.

Easy to operate—hand or power—nothing to get out of order—a speedy worker and the shear keeps sharp even after months



BLOW PIPE FITTINGS

MARSHALLTOWN MANUFACTURING CO.

MARSHALLTOWN, IOWA



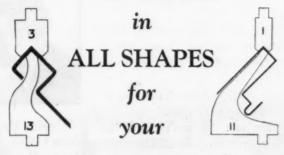
Prompt Shipments-Write for Price List ALFRED C. GOETHEL CO. 833 31st ST.,

ED METALS

All Sizes and Shapes of Hole In Steel, Zinc, Brass, Copper, Tinplate, etc. For All Screening, Ventilating and Draining EVERYTHING IN PERFORATING METAL

THE HARRINGTON & KING PERFORATING (0

Forming DIES



POWER PRESSES OR BRAKES

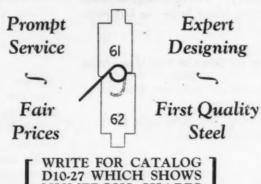
Tell us what you want to form---just send us a sketch



No obligation to consult us for our expert advice on dies

X/E design and manufacture forming dies to your specifications for working sheet metal in any shape.

We can save you time and money by designing dies that cut down the number of stamping operations.



NUMEROUS SHAPES

HAND POWER TOOLS AND POWER PUNCH PRESSES

LA SALLE MACHINE WORKS

3019 SO. LASALLE ST. CHICAGO, ILL.

RANDOM NOTES AND SKETCHES

"Say, old fellow, it's strange to see you going around in that old light coat this chilly weather while your wife is wearing a swell new coat."

"Well, all I have to do is think of her fur coat and immediately I start perspiring."

Judge: "Why have you not made these alimony payments?"

Defendant: "I can't start till week after next, Judge. There are still two installments due on the engagement ring."

Dave Farquhar, of T. & B. Register, and Jim Doherty, of Detroit, were wending their way along Michigan Avenue about 2 p. m. when Dave stopped to gaze dazedly at a sign.

"Whatchu lookin' at?" said Jim.

"That sign."

"Whazzit say?"

"Ladies Ready to Wear Clothes."

"Dern near time, if anyone was to ask me," came the reply.

Wife: "Every time you see a pretty girl you forget you're married."

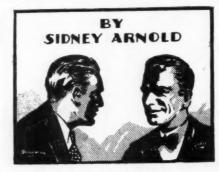
Hubby: "You're wrong, m' dear. Nothing brings home the fact more forcibly."

Soup for Some of You Unmarried "Birds"

Angelica: "Joe's new speedster is awfully cute."

Betty: "Yes, you ought to see it play dead on a lonely road."

Doctor, to C. S. Trott, Parker-Kalon Corporation: "Yes, you're all run down. I suggest that you lay off golf for a while, return to business and get a good rest at your office."



Charles Thorp, Fort Wayne, Indiana—"Can you cash this check for me?"

Village Banker (looking it over)
—"I ain't got that much, but I'll take you over to the filling station and introduce you."

Bought No Empties

"O. E., dear," said Mrs. O. E. Hutchison, Louisville, "how do you suppose those dozens and dozens of empty bottles ever got into our cellar?"

"Why, I don't know, my dear," said O. E. "I never bought an empty bottle in my life."

I overheard two small children in boastful conversation the other day.

"My father," said the first, "has electricity in his hair."

"That ain't nothin'," came back the second, "my old man's got gas in his stomach."

Judge (sternly): "What excuse have you for having nearly murdered this man?"

Culprit (sternly): "Your Honor, I have a can-opener wife and this health crank comes along and advises me to always get up from the table hungry."



Always Tell Them Something "Now, Paul, tell me why we put a hyphen in bird-cage."

"It's for the birds to sit on."

Mrs. P. M. Lorenz: "Well, the auto show was lovely but it does put ideas in one's head, doesn't it?"

P. M.: "Indeed, it does. What do you say we go over and buy Junior that kiddie car we promised him?"

Omitted One Little Item

"Here, Mary, is my envelope
Unopened, nice and fat;
Trot out that budget book you bought
And stack it up 'gainst that."

"Yes, John, 'twill be such fun to chart, To watch it go so far; We've thirty-five still left when we've Paid five upon the car.

"Just like a game, dear, isn't it, Or school slate long ago? Next I'll subtract three dollars due Upon the radio.

"I hate to put this seven down, It means so big a dent; Don't seem to have a thing to show For what we pay in rent.

"The vacuum cleaner, that takes two, Washing machine needs three; Electric ice-chest, five for that— They're handy as can be.

"On little May's piano three, And one on Willie's wheel; A dollar on that set of books— The strain we never feel.

"That darling wrist watch two; two more That lovely morning gown; You need a winter overcoat— Just get one, dollar down.

"There's five whole dollars left—I'm sure I've put them all down here;
Think all the lovely things we've got
We'll soon own free and clear."

"The incidentals, Mary dear—
They'll make the final class;
That's how your budget shows things
up—
Smokes, movies, fares and gas."

Their spirits up with dollars down, Both smiled in joyful mood, Too blithe and gay to note one wee Omitted item—food.

B. F. Griffin.



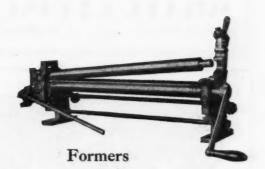


Crimpers



Turning
Wiring
Burring
Beading
Machines







Folders

What's in a Name!

High grade materials, good workmanship, advanced construction, low initial cost, and a record small up-keep sum up what the PEXTO trade-mark on a sheet metal working machine implies. More than that, you assume no risk or disappointment on a PEXTO decision. If your dealer is not a "PEXTO SERVICE DEALER," immediate shipment can be had from factory.

THE PECK, STOW & WILCOX COMPANY

Southington, Conn., U. S. A.



Your Insurance—Over 100 Years of Conservative Growth.

ORNAMENTS ZINC-CODDER-BRONZE



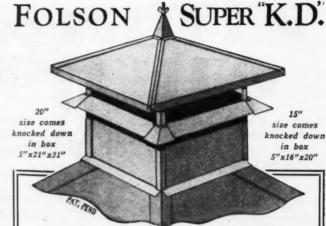
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SPECIAL WORK OF ALL KINDS

MILLER & DOING, Inc.

66 York Street

Brooklyn, N. Y.



The KNOCK DOWN Ventilator Efficient and Good Looking

YOU never saw anything like it—its appearance makes it desirable—its great ventilating efficiency gives it preference and its knock down feature means much to you.

You assemble it in 12 minutes

and it is easy to install on any roof. Instruction sheets for assembling and installing sent with each ventilator. Everything is turnished complete.

It gives continuous ventilation with wind from any direction
—no operating cost—adjustable safety damper automatically
open, operated from floor level. Automatic screen guards
keep birds out—no louvres or other parts to hinder ventilation—low transportation costs and other features.

Write for full details, illustrated circular and prices today.

FOLSON METAL PRODUCTS CO.

5111 W. North Avenue

Chicago, Illinois



GEROCK BROS. MFG. CO.

SHEET METAL ORNAMENTS

1252 So. Vandeventer Ave., St. Louis, Mo., U.S.A.
Write for Catalogue

The NEW IMPROVED "STANDARD"



Rotable Ventilator

Now made of Armco Iron
This favorite cone-shaped ventilator is now improved in several important points.

The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

upon the pivot point of the stationary center spindle.

The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body in the stationary to screech when body

There are other new features. Write today for new catalog and price list.

STANDARD VENTILATOR CO., Lewisburg, Pa.

The 12-Cylinder Ventilator Used in Every State in the Union.

SPECIFY ÆOLUS VENTILATORS

ÆOLUS FOR HOMES

The home should be properly ventilated—few of them are. Here is a sales opportunity oft'n overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

Æolus-Dickinson

Vent Makers Since 1888 3332-52 South Artesian Avenue CHICAGO

Phone: Lafayette 1862-1863

IF there is a tool or machine that you need and you don't know where to get it—

Write to the

Notes and Queries Dept.

of

AMERICAN ARTISAN



"Put on a GOOD roof"

AND they really mean it—they want a roofing that is pleasing to the eye—a roof that will last a long time—with low upkeep cost and, of course, they want low cost per year of service.



MADE ENTIRELY BY HAND

by an old Welsh hand dipping process and it has been the Best in terne plate for more than a century.

There's a Better Profit for you and a Better Roof for your customers—

when you convince them that the extra cost for Target and Arrow Hand Made Tin means many added years of service. Many folks are getting tired of the big expense involved in putting on new roofs every two or three years—you can easily sell these prospects a Target and Arrow Hand Made Tin Roof when they say they want a GOOD roof.

TAYLOR'S EXTRA COATED

40 lbs. Copper Bearing O. H.

is a roofing tin made by modern machinery. It is the best machine made roofing tin on the market—costs less than the hand made and it also makes a good roof.

Sold by Distributors in All Parts of the Country.

N. & G. TAYLOR COMPANY

BROAD AND ARCH STREETS, PHILADELPHIA, PA.

Headquarters for Good Roofing Tin Since 1810



Quality and Service Made 'em Famous

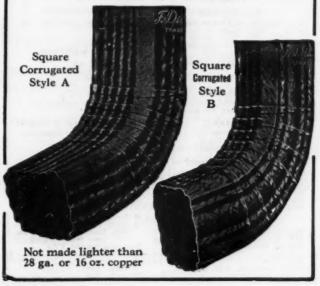
Made of one piece of heavy gauge material, in all styles and angles from 10 to 90 degrees, of 24, 26, 28 ga. ternes, then galvanized after formation.

DIECKMANN Elbows and Shoes

are the standard of the market and always give satisfaction

Send for new catalogue 26 showing complete line

The Ferdinand Dieckmann Co.
P. O. Station B. Cincinnati, O.



Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

METALS	LEAD	Adams' Sheet Metal	FIRE POTS
PIG IBON	American Pig	7 inch, doz	Geo. W. Diener Mfg. Co. No. 02 Gasoline Torch, 1 qt
Chicago Fdy., No. 2	Bar Tinper 100 lbs. \$50 00 Pig Tinper 100 lbs. 49 00	10 inch, doz	No. 9250, Kerosene, or Gasoline Torch, 1 qt 6 50
Malieable 20 00	HARDWARE, SHEET		No. 10 Tinner's Furn. Square tank, 1 gal 11 20
FIRST QUALITY BRIGHT CHARCOAL TIN PLATES IC 20x28 112 sheets\$25 50	METAL SUPPLIES, WARM AIR FURNACE	Galv. Crimpedge, crated75-10%	No. 15 Tinner's Furn. Round tank, 1 gal 10 70
IX 30x28 35 50 IXX 20x28 56 sheets 14 50 IXXX 20x28 15 50	FITTINGS AND ACCES-	Zinc, "Barnes"60%	No. 21 Gas Soldering Furnace 8 60
TXXXX 20x28	SORIES.	ELBOWS	No. 110 Automatic Gas Soldering Furnace 10 50
TERNE PLATES Per Box IC 20x28, 40-lb. 112 sheets \$26 70 IX 20x28, 40-lb. 112 sheets 29 70 IC 20x28, 25-lb. 112 sheets 32 20	Paper up to 1/166c per lb. Roll board7½c per lb. Mill board 3/22 to ½, 7½c per lb. Corrugated Paper (250	Conductor Pipe Gaiv. plain or corrugated, round flat Crimp,	GALVANIZED WARD
IX 20x28, 25-lb. 112 sheets 25 20 IC 20x28, 20-lb. 112 sheets 20 25 IV 20x28, 20-lb. 112 sheets 28 00	sq. ft. to roll)\$6 00 per roll	28 Gauge	Pails (Galv. after made), 10-qt\$2 00
"ARMCO" INGOT IRON PLATES	BRUSHES Furnace Pipe Cleaning	Galv. Terne Steel	Tubs (Galv. after made). No. 1 5 78
No. 8 ga.—100 lbs	Bristle with handle each \$0 75 Fine Cleaning Steel only, each	Plain Rd. and Rd. Corr.:	No. 2 6 50
COKE PLATES	CEMBINT, FURNACE	26 Ga	GLAS8
Cekes, 80 lbs., base, 20x28 \$12 00 Cokes, 90 lbs., base, 20x28 12 20 Cokes, 100 lbs., base, 20x28 12 49	American Seal, 5-lb. cans, net \$ 45 American Seal, 10-lb. cans, net \$ 5 American Seal, 25-lb. cans, net 2 25	Square Corrugated	Single Strength, A, all brackets
Cokes, 107 lbs., base, IC 20x28	Pecoraper 100 lbs. 7 50	No. 28 Gauge	Single Strength, B, all brackets
Cokes, 155 lbs., base, 2X,	CHIMNEY TOPS Adams' Revolving	Portico Elbows	Double Strength, A, all brackets
Cokes, 175 lbs., base 3X, 56 sheets	Wt. Doz. Price Doz. 4 in. .21 lbs. .\$11 00 6 in. .24 lbs. .11 50 7 in. .80 lbs. .13 50	Standard Gauge Conductor Pipe, plain or corrugated.	Double Strength, B, all brackets87%
RITE ANNEALED SHEETS	8 in	Not nested	HANGERS
Base 10 gaper 100 lbs. \$3 \$5 "Armco" 10 gaper 100 lbs. 4 15	12 in	Sq. Corr., A. & B. & Octagon	Conductor Pipe
ONE PASS COLD BOLLED BLACK No. 18-20per 100 lbs. \$3 85	CLINKER TONGS	28 Ga	Milcor Perfection Wire16% Milcor Triplex Wire10%
No. 22per 100 lbs. 4 00 No. 24per 100 lbs. 4 05	Each\$1 50	Portico	Eaves Trough Milcor Steel (galv. after
No. 26per 100 lbs. 4 15 No. 27per 100 lbs. 4 20 No. 28per 100 lbs. 4 30	Damper No-Rivet Steel, with tail	1", 1¼", 1¼"45% Copper	Milcor Selflock B. T. Wire, List
No. 29per 100 lbs. 4 45 No. 30per 100 lbs. 4 55	pieces, per gross\$9 80 Rivet Steel, with tail pieces, per gross 7 50	16 oz., all designs40%	
"ARMCO" GALVANIZED "Armco" 24per 100 lbs. \$6 15	Tail pieces, per gross 2 40 COPPERS—Soldering Pointed Roofing	Zinc— All styles60%	Conductor "Direct Drive" Wrought
GALVANIZED No. 16 per 100 lbs. \$4 40	3 lb. and heavierper lb. 40c 21/2 lbper lb. 45c	ELBOWS-Stove Pipe	Iron for wood or brick15%
No. 18 per 100 lbs. 4 55 No. 20 per 100 lbs. 4 70 No. 22 per 100 lbs. 4 75	2 lb	1-piece Corrugated. Uniform Blue "Milcor" No. 28 Gauge. Doz.	HUMIDIFIER-
No. 24 per 100 lbs. 4 90 No. 26 per 100 lbs. 5 15	CORNICE BRAKES	5-inch\$1 15 6-inch	"Front-Rank," Automatic In single lots
No. 27per 100 lbs. 5 25 No. 28per 100 lbs. 5 40	Chicago Steel Bending Nos. 1 to 6BNet	7-inch 1 75	In lots of 10 or more50-5%
No. 30per 100 lbs. 5 80 BAR SOLDER	CUT-OFFS	Special Corrugated	In lots of 25 or more59-10%
Warranted 50-50 per 100 lbs. \$31 25 48-52 per 100 lbs. 30 50 45-55 per 100 lbs. 29 25	Gal., plain, round or cor. rd. 26 gauge	6-inch	Vapor pans, etc., each50%
Plumbers' per 100 lbs. 27 25	DAMPERS	Adjustable—Uniform Blue "Milcor" No. 28 Gauge. Uniform	Stove Cover
ZINC In Slabs 7 36	Yankee Hot Air 7 Inch, doz\$1 60	Blue.	Copperedper gro. \$6 00 Alaskaper gro. 4 75
III DIEDS	The state of the s		Almanaper gro. a 10
SHEET ZING	8 inch, doz	5-inch	
SHEET ZINC Cask Lots (600 lbs.)	9 inch, doz		Tinners
Cask Lots (600 lbs.)\$11 75 Sheet Lots	9 inch. doz	6-inch	
Cask Lots (606 lbs.) \$11 75 Sheet Lots 12 76 BRASS Sheets, Chicago base 24 ½ c Mill base 23 ½ c Tubing, brazed, Chicago base 31 % c	9 inch, doz	6-inch	Tinners
Cask Lots (606 lbs.) \$11 75 Sheet Lots 12 76 BRASS Sheets, Chicago base 24 ½ c Mill base 23 ½ c Tubing, brazed, Chicago base 31 ½ c Mill base 30 ½ c Tubing, seamless, Chicago	9 inch, doz	6-inch	Tinners Hickoryper des. \$2 38 MITRES Galvanised steel mitres
Cask Lots (606 lbs.)	9 inch, doz. 2 60 10 inch, doz. 2 80 12 inch, doz. 3 50 14 inch, doz. 5 00 ADAMS No. 1 CHECK Check and Collar Complete 8 inch, each. 2 90 9 inch, each. 2 35 End Check Only 8 inch, each. 1 60 9 inch, each. 1 85 Collar Only 8 inch, each. 5 60	6-inch	Tinners Hickoryper des. \$2 25 MITRES
Cask Lots (606 lbs.)	9 inch, doz	6-inch	### Tinners Hickory
Cask Lots (606 lbs.)	9 inch, doz. 2 60 10 inch, doz. 2 80 12 inch, doz. 3 50 14 inch, doz. 3 50 14 inch, doz. 5 00 ADAMS No. 1 CHECK Check and Collar Complete 8 inch, each. 2 35 End Check Only 8 inch, each. 1 60 9 inch, each. 50 9 inch, each. 65 No. 2 CHECK 8 inch, each. 1 00 8 inch, each. 1 00	6-inch 1 75 7-inch 2 19 WOOD FACES—60% off list. FENCE 726-6-12\% (100 rods) . \$28 68 1948-6-14\% (100 rods) . 43 62 FILES AND RASPS Heller's (American) 56-10% American 60-10% Arcade 56% Black Diamond . 56%	Tinners Hickoryper des. \$2 28 MITRES Galvanised steel mitres 28 Ga
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Cask Lots (606 lbs.)	9 inch, doz. 2 60 10 inch, doz. 2 80 12 inch, doz. 3 50 14 inch, doz. 3 50 14 inch, doz. 5 00 ADAMS No. 1 CHECK Check and Collar Complete 8 inch, each 2 90 9 inch, each 2 35 End Check Only 8 inch, each 1 85 Collar Only 8 inch, each 50 9 inch, each 65 No. 2 CHECK 8 inch, each 1 90 inch, each 2 CHECK Sinch, each 1 90 inch, oach 1 90 inch, oach 2 Check Diamond Smoke Pipe 7 inch, doz. \$2 00	6-inch 1 75 7-inch 2 19 WOOD FACES—60% off list. FENCE 726-6-12%% (100 rods) .228 68 1948-6-14%% (100 rods) .43 62 FILES AND RASPS Heller's (American) .50-10% Arcade .50% Black Diamond .50% Eagle .50% Great Western .50% Kearney & Foot .50%	Tinners Hickory



HYRO DAMPER QUADRANTS



View of a Quadrant installation with part of the duct cut away to show the damper.



HYRO DIAL DAMPER REGULATOR

PROMINENT architects and leading heating and ventilating engineers recommend the use of Hyro "UNXLD" Damper Quadrants; thousands of sheet metal contractors use them; and more than 650 jobbers sell them, because they are the simplest, neatest and most efficient device yet designed for regulating dampers in hot and cold air ducts, smoke pipes, dust arrester systems, etc.

Hyro "UNXLD" Damper Quadrants and Hyro Dial Damper Regulators are easy to install, either to flat or curved surfaces. They lock the damper at any desired angle-assuring positive control of the passage of air. They are simple in construction-few parts-nothing to get out of order.

Made in 5 sizes for regulating dampers from the smallest to the largest.

Send for bulletin giving full information on Hyro "UNXLD" Damper Quadrants, Hyro Dial Damper Regulators, and other time-and-labor-saving damper accessories.

Other HYRO Time and Labor -Saving DAMPER ACCESSORIES

> **HYRO** ROD CLIPS



No. 1,411,745

Offer a quick and easy mean Jastening square roa to ampers, eliminating the necessity of drilling the damper rod which weakens it. Made for the following sines of square rod: 14", 14", 14" and 14". Furnished in galvanized finish

HYRO DAMPER BEARINGS



Used instead of rods on small and medium sixe dampers. and modium size dampers. Quickly attached. Made in two sixes—\(\frac{3}{4}\) "to fit \(\frac{3}{4}\)" Damper Quadrants or Dial Damper Regulators and \(\frac{3}{4}\)" to \(\frac{5}{1}\)" \(\frac{3}{4}\)" \(\frac{5}{4}\)" \(\frac{3}{4}\)" \(\frac{3}{4}\)" \(\frac{5}{4}\)" \(\frac{3}{4}\)" \(\frac{5}{4}\)" \(\frac{3}{4}\)" \(\frac{3}\)" \(\frac{3}{4}\)" \(\frac{3}{4}\)" \(\frac{3}{4}\)" \(\f

HYRO MANUFACTURING CO., INC.

Sheet Metal Workers' Tools and Hardware Specialties

202 VARICK STREET

NEW YORK

Distributed in Canada by Aikenhead Hardware, Limited, Toronto, 2, Canada

ADVERTISERS' INDEX

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on a regular schedule but	does not appear in this issue.	
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America 64	35 1 1 73 1 8 13 Co 40	L
Arex Co	Manlaward Machinery Co 101	-
Auer Register Co	Marshall Furnace Co 56	
	Marshalltown Mfg. Co 93	
В		•
B. & F. Mfg. Co 66 Barnes Metal Prod. Co		
Beh & Co		0
Bertsch & Co 101	Midland Furnace Co 43	
Berger Bros. Co 103		
Brillion Furnace Co		
Burgess Soldering Furnace Co.		F
C	N	*
Canton Furnace & Mfg. Co		
	National Super Service Co 61	
Chicago Furnace Supply Co., 61		
Chicago Metal Mfg. Co	The —	
Cleveland Castings Pattern		Ľ
Co 66 Colburn Heater Co	Nortman-Duffke Co —	
Connors Paint Co., Wm		-
Copper & Brass Research As-	. 0	8
sociation	Osborn Co., The J. M. & L. A. 91	44
	Oxweld Acetylene Co	
D		
Dieckmann Co., Ferdinand 97	P	
Diener Mfg. Co., Geo. W 101	Parker, Kalon Corp 107 Peck, H. E 106	
Dreis & Krump Mfg. Co 101	Peck Stow & Wilcox 95	
	Preferred Oil Burners, Inc	
E	Premier Warm Air Heater Co. 42	
Eller Mfg. Co	Premier Warm Air Heater Co. 42	
Santa Andrea	Q	T
Eller Mfg. Co	0	T
Eller M(g. Co	Q Quincy Pattern Co 60	TAN
Eller M(g. Co	Q Quincy Pattern Co 60	TAN
Eller M(g. Co	Q Quincy Pattern Co	TAN
Eller Mfg. Co	Q Quincy Pattern Co	AN
Eller Mfg. Co	Q Quincy Pattern Co	AN
Eller Mfg. Co.	Q Quincy Pattern Co	AN
Eller Mfg. Co	Q Quincy Pattern Co	AN
Eller Mfg. Co.	Q Quincy Pattern Co	AN
Eller Mfg. Co	Quincy Pattern Co	AN
Eller Mfg. Co.	Q Quincy Pattern Co	AN
Eller Mfg. Co.	Q Quincy Pattern Co	AN
Eller Mfg. Co.	Q Quincy Pattern Co	AN F
Eller Mfg. Co.	Q Quincy Pattern Co	AN F
Eller Mfg. Co.	Quincy Pattern Co	AN F
Eller Mfg. Co	Quincy Pattern Co	AN F
Eller Mfg. Co	Q Quincy Pattern Co	AN F F
Eller Mfg. Co	Q Quincy Pattern Co	AN F F
Eller Mfg. Co	Quincy Pattern Co	AN F F
Eller Mfg. Co	Quincy Pattern Co	AN F F
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF
Eller Mfg. Co.	Q Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FFF
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co.	Quincy Pattern Co	ANN FF FF CC MM
Fanner Mfg. Co. 60	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co	Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co	Q Quincy Pattern Co	ANN FF FF CC MM
Eller Mfg. Co	Quincy Pattern Co	ANN FF FF CC MM

Markets--Continued from Page 98

PASTE	RIDGE ROLL
Asbestos Dry Paste:	Galv., Plain Ridge Roll,
200-lb. barrel\$14 00	b'dld
100-lb. barrel 7 50	Galv., Plain Ridge Roll
50-1b. pail 4 35 10-1b. bag 1 00	crated75-15
5-lb. bag 55	
31/2-lb. cartons 25	
	SCREWS
POKERS, FURNACE	Sheet Metal
Each\$0 75	7, %x%, per gross\$0 53
	No. 10, %x3/16, per gross 68
POKERS, STOVE	
	No. 14, %x%, per gross 33
Nickel Plated, coil handles, per doz 1 10	
W'r't Steel, str't or bent,	
per dos \$0 75	SHEARS, TINNERS'
	& MACHINISTS'
Conductor	Viking\$23 00
Cor. Rd., Plain Rd., or Sq.	Torono Mhorodino
	Lennox Throatless
Galvanised	No. 18
Crated and nested (all	Shear blades10%
gauges)	(f. o. b. Marshalltown, Iewa)
(all gauges)76-2%%	
Furnace Pipe	
Double Wall Pipe and	SHIELDS, ADJUSTABLE
Fittings	RADIATOR
Galvanized Pipe 60 & 10%	
Galvanized Pipe 50 & 10% Galvanized and Tin Fit- tings	No. 1 "Gem" 11" to 17"30%
	No. 2 "Gem" 14" to 24"30%
Lead	No. 8 "Gem" 35" to 65"30%
Per 100 lbs\$12 50	
Stove Pine	
Stove Pipe	SHOES
"Milcor" "Titelock" Uniform Blue Stove	Galv. 28 Gauge, Plain or cor-
28 gauge, 5 inch U. C.	rugated round flat crimp60%
nested	
nested	26 gauge round flat crimp45%
nested 14 00	24 gauge round flat crimp15%
so gauge, b inch U. C.	
30 gauge, 6 inch U. C.	SNIPS, TINNERS
nested	
nested 13 00	Clover Leaf 40 & 10%
T. Joint Made un	National40 & 10%
T-Joint Made up	National40 & 10% Star50%
6-inch, 28 gapar ios. 9 3 40	
6-inch, 28 gapar tos. 9 3 40	Star50%
6-inch, 22 gaper 4os. 9 3 40 All Zine No. 11, all styles	Star
6-inch, 28 gapar ios. 9 3 40	Star
6-4nch, 22 gaper 40a 9 3 40 All Ziae No. 11, all styles	Star
6-4nch, 22 gaper 40a 9 3 40 All Zise No. 11, all styles	Star
6-inch, 22 gaper 40a, 9 3 40 All Zise No. 11, all styles	Star
6-4nch, 22 gaper 40a 9 3 40 All Zise No. 11, all styles	Star
6-4nch, 22 gaper 40a \$ 3 40 All Zise No. 11, all styles	Star
6-tach, 22 gaper 40a 9 3 40 All Elae No. 11, all styles	Star
6-tach, 22 gaper 40a 9 3 40 All Elae No. 11, all styles	SQUARES SQUARES
6-inch, 22 gaper 40a § 3 40 All Else No. 11, all styles	Star
6-4nch, 22 gaper 40a \$ 3 40 All Ziee No. 11, all styles	SQUARES SQUARES
6-tach, 22 gaper 40a 9 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a 9 3 40 All Zine No. 11, all styles	Star
6-tach, 22 gaper 40a 9 3 40 All Zine No. 11, all styles	Star
6-inch, 22 gaper 40a § 3 40 All Else No. 11, all styles	Star
6-tnch, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a 9 3 40 All Zine No. 11, all styles	Star
6-tnch, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
G-tnch, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
G-tnch, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Elae No. 11, all styles	Star
G-tnch, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star 50%
6-tach, 22 gaper 40a \$ 3 40 All Elae No. 11, all styles	Star
G-tach, 22 gaper 40a § 3 40 All Else No. 11, all styles	Star
G-tach, 22 gaper 40a § 3 40 All Else No. 11, all styles	Star 50%
6-tach, 22 gaper 40a § 3 40 All Elae No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star 50%
6-tach, 22 gaper 40a \$ 3 40 All Else No. 11, all styles	Star 50%

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-Bending. Brakes-

Dreis & Krump Mfg. Co., Chicago, Ill. Ryerson & Son., Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Brakes-Cornice.

Dreis & Krump Mfg. Co., Chicago, Ill.

Brass and Copper.

American Brass Co., Waterbury, Conn. Copper & Brass Research Association, New York

Cans—Garbage.
Osborn Co., The J. M. & L. A.,
Cleveland, Ohio

Castings-Malleable. Fanner Mfg. Co., Cleveland, Ohio

Ceilings-Metal.

Eller Manufacturing Co., Canton, Ohio Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Chaplets.

Fanner Mfg. Co., Cleveland, Ohio

Chimney Tops.

Standard Ventilator Co., Lewisburg, Pa.

Cleaners-Vacuum.

Brillion Furnace Co., Brillion, Wis. Gottschalk Heating Co., Covington, Ky. National Super Service Co., Toledo, Ohio

Copper. American Brass Co., Waterbury, Conn. Copper & Brass Research As-sociation, New York

Eller Manufacturing Co., Canton, Ohio Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Cut-offs-Rain Water.

Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Dampers-Quadrants-Accessories.

Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City Parker-Kalon Corp., New York, N. Y.

Damper Regulator Co., Chicago, Iil. Quincy, Iil.

-Punch & Press.

Air Cleaners.

Meyer & Bro. Co., F., Peoria, Ill. La Salle Machine Works,
Chicago, Ill.

Diffuser-Air Duct. Aeolus-Dickinson Co., Chicago, Ill.

Doors-Metal.

Lupton's Sons Co., David, Philadelphia, Pa.

Draft Regulators.
Gray Brothers Co., Plano, Ill.

Drive Screws-Hardened Metallic. Parker-Kalon Corp., 200 Varick St., New York

Alfred C. Goethal Co.,
Milwaukee, Wis. Barnes Metal Products Co.,
Chicago, Ill.

Alfred C. Goethal Co.,
Milwaukee, Wis.

Blow Pipe Fittings.

Alfred C. Goethal Co.,
Milwaukee, Wis.

Bolts—Stove,

Bolts—Stove,

Barnes Meta.

Chicago,
Philadelphia, Pa.
Lupton's Sons Co., David,
Philadelphia, Pa.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
New Jersey Zinc Sales Co., The,
New York, N. Y.

Elbows and Shoes-Conductor. Barnes Metal Products Co., Chicago, Ill. Dieckmann Co., Ferdinand, Cincinnati, Ohio Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Wood Faces-Warm Air.

Auer Register Co., Cleveland, Ohio American Wood Register Co., Plymouth, Ind. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Fittings-Conductor.

Barnes Metal Products Co., Chicago, Ill. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Chicago Metal Mfg. Co., Chicago, Ill.

-Steel Pipe. Chicago Metal Mfg. Co., Chicago, Ill.

Flue Thimbles.

Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Furnace Cement-Asbestos.

Connors Paint Mfg. Co., Wm., Troy, N. Y. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Furnace Cement-Liquid.

Technical Products Co., Pittsburgh, Pa.

Furnace Cleaners-Suction

Brillion Furnace Co., Brillion, Wis. Gottschalk Heating Co., Covington, Ky. National Super Service Co., Toledo, Ohio

Furnace Fans.

A-C Mfg. Co., Pontiac, Ill. Canton Furnace & Mfg. Co., Canton, Ohio A. H. Robinson Co.,

Massillon,
Warm Air Furnace Fan Co.,
The, Cleveland, Ohio
Williamson Heater Co.,
Cincinnati, Ohio

Furnace Fuse.

National Regulator Co., Chicago, Ill.

Furnace Regulators.

National Regulator Co., Chicago, Ill. H. M. Sheer Co., Quincy, Ill.

Furnace Rings.

Forest City-Walworth Run Foundries Co., Cleveland, Ohio Milwaukee Corrugating Co., Milwaukee, Wis.

Furnaces-Warm Air.

Agricola Furnace Co., Gadsden, Ala. Agricola Furnace Co., Gadsden, Ala.
American Furnace Co., St. Louis, Mo.
Brillion Furnace Co., Brillion, Wis.
Canton Furnace & Mfg. Co.,
Canton, Ohio
Emrich Co., C., Columbus, Ohio
Farris Furnace Co., Springfield, Il.
Floral City Heater Co., Monroe, Mich.
Foral City Heater Co., Monroe, Mich.
Forest City-Walworth Run Fdy.,
Cleveland, Ohio
Hall-Neal Furnace Co., Elyria, Ohio
Hall-Neal Furnace Co., Cleveland, Ohio
Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Hess-Snyder Co., Massillon, Ohio
Homer Furnace Co., Mich.

Floral City Heater Co., Meyer Furnace Co., The Peoria, Ill.
Waterman-Waterbury Co., Minneapelis, Minn.

Hotels.
Fort Shelby Hotel,
Detroit, Mich.

Humidifiers.

Meyer & Bro. Co., F., Peoria, Ill.
Lath—Expanding Metal.
Milwaukee Corrugating Co..
Mil., Ch'go, La Crosse, Kan. City
Machines—Crimping.

P. H.,

May Fiebeger Furnace Co.,

Newark, Ohio May Fiebeger Furnace Co.,
Marshall Furnace Co.,
Marshall Furnace Co.,
Meyer Furnace & Mfg. Co.,
Mt. Vernon, Ill.
Premier Warm Air Heater Co.,
Dowagiac, Mich.
Richardson & Boynton Co.,
New York, N. Y.
Robinson Co., A. H.,
Massillon, Ohio
Success Heater Mfg. Co.,
Des Moines, Ia.,
XXth Century Heating & Ventilating Co.,
Minneapolis, Minn.
Western Steel Products Co.,
Williamson Heater Co.,
Cincinnati, Ohio
Duluth, Minn.
Wise Furnace Co.,
Akron, Ohio

Glass-Wire. Lupton's Sons Co., David, Philadelphia, Pa.

Grilles.

Auer Register Co., Cleveland, Ohio Harrington & King Perforating Co., Chicago, Iil. Hart & Cooley Co., New Britain, Conn. Tuttle & Bailey Mfg. Co., Chicago, Iil.

Grilles-Stove Front. Tuttle & Bailey Mfg. Co., Chicago, Ill.

Guards-Machine and Belt.

Harrington & King Perforating Co., Chicago, Ill. Co., Nortmann-Duffke Co., Milwaukee, Wis.

Handles-Boller Berger Bros. Co., Philadelphia, Pa.

Handles-Soldering Iron Hyro Mfg. Co., New York, N. Y.

Hangers-Eaves Trough. Hangers—Eaves Trough.
Berger Co., L. D., Philadelphia, Pa.
Horan Stay Hanger Co.,
Louisville, Ky.
Lupton's Sons Co., David,
Philadelphia, Pa.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Heat Regulation Co., Chicago, Ili. Co., Quincy, Ili.

Heaters-Cabinet Fox Furnace Co., Elyria, Ohio Waterman-Waterbury Co., Minneapolis, Minn.

Heaters-Combination Hot Water. Alamo Heater Co., Chicago, Ill.

-Domestic Hot Water. Alamo Heater Co., Chicago, Ill.

Heaters-School Room. Heaters School
Floral City Heater Co.,
Monroe, Mich.
Meyer Furnace Co., The,
Peorla, Ill.

Bertsch & Co., Cambridge City, Ind.

Machinery—Culvert.

Bertsch & Co., Cambridge City, Ind.

Machines-Tinsmith's.

Machines—Trasman.

Bertsch & Co.,
Cambridge City, Ind.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Interstate Machinery Co.,
Chicago, Ill.
Maplewood Machinery Co.,
Chicago, Ill.
Maplewood Machinery Co.,
Maplewood Machinery Co., Chicago, Iil.

Marshalltown Mfg. Co.,

Marshalltown, Iewa
Osborn Co., The J. M. & L. A.,

Cleveland, Ohie
Peck, Stow & Wilcox Co.,

Southington, Cons.
Ryerson & Son, Inc., Jos. T.,

Chgo., N. Y., St. L., Det., Cleve.
Hyro Mfg. Co., New York, N. Y.

Metals—Perforated.

Harrington & King Perforating
Co... Chicago, Ill. Nortmann-Duffke Co., Milwaukee, Wis.

Miters.

Braden Mfg. Co., Terre Haute, Ind. Friedley-Voshardt Co., Chicage, Ill. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Miters-Eaves Trough.

Barnes Metal Products Co., Chicago, Ill. Lupton's Sons Co., David,
Philadelphia, Pa. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Nails-Hardened Masonry. Nails—Harder-Kalon Corp., Parker-Kalon Corp., New York, N. Y.

Oil Burners.

McIlvaine Burner Corp., Evanston, Iti. Northern Oil Burner Co., Minneapolis, Minn. Preferred Oil Burners, Inc., Peoria, Ill.

Ornaments-Sheet Metal.

Ornaments Siece Friedley-Voshardt Co., Chicago, Ill. Gerock Bros. Mfg. Co., St. Louis, Me. Miller & Doing, Inc.,

Brooklyn, N. Y.

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

Paint. Connors Paint Mfg. Co., Wm., Troy, N. T.

Patterns-Furnace and Stove. Cleveland Castings Pattern Co., Cleveland, Ohio Quincy Pattern Co., Quincy, Ill. Quincy Pattern Co., Quincy, Ill. Vedder Pattern Works, Troy, N. Y.

(Continued on page 104)



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BUYERS' DIRECTORY

(Continued from page 102)

Perforated Metals.

Harrington & King Perforating
Co., Chicago, Ill.

Nortmann-Duffke Co.,
Milwaukee, Wis.

Pipe and Fittings—Furnace. Chicago Furnace Supply Co., Chicago, Ill. Chicago Furnace Chicago, Ill.

Henry Furnace & Fdy. Co..
Cleyeland, Ohio
Lamneck Co., W. E.,
Columbus, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
Osborn Co., The J. M. & L. A.,
Cleveland, Ohio

Pipe and Fittings—Stove.
Meyer & Bro. Co., F., Peorla, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Pipe—Conductor.
Barnes Metal Products Co.,
Chicago, Ill. Barnes accompany to the control of t Chicago, Ill.

Lupton's Sons Co., David,
Philadelphia, Pa.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
New Jersey Zinc Sales Co., The
New York, N. Y.

Presses.
La Salle Machine Works,
Chicago, Ill.

Pipe Covering.
Sall Mountain Co., Chicago, Iil.

Bertsch & Co., Bertsch & Co.,
Cambridge City, Ind.
Interstate Machinery Co.,
Chicago, Ill.
La Salle Machine Works,
Chicago, Ill.
Peck, Stow & Wilcox Co.,
Southington, Conn.
Ryerson & Son., Inc., Jos. T.,
Chgo, N. Y., St. L., Det., Cleve.

Punches-Combination Bench and Hyro Mfg. Co., New York, N. Y. Ryerson & Son. Inc., Jos. T., Chgo, N. Y., St. L., Det., Cleve.

Punches—Hand. Hyro Mfg. Co., New York, N. Y. Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Putty-Stove.
Connors Paint Mfg. Co., Wm.,
Troy, N. Y.

Radiator Cabinets.
The Hart & Cooley Mfg. Co..
New Britain, Conn.
Tuttle & Bailey Mfg. Co.,
Chicago, Ill.

Radiators—Shields.
Beh & Co., Inc., New York, N. Y.
Hall-Neal Furnace Co.,
Indianapolis, Ind.

Register Shields.
Beh & Co., Inc., New York, N. Y.
Hall-Neal Furnace Co.,
Indianapolis, Ind.

Indianapolis, Ind.

Registers—Warm Air.

Auer Register Co., Cleveland, Ohio
Forest City-Walworth Run
Foundries Co., Cleveland, Ohio
Hart & Cooley Co.,
New Britain, Conn.
Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Independent Register & Mfg. Co.,
Cleveland, Ohio
Lamneck & Co., W. E.,
Columbus, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go. La Crosse. Kan. City
Rock Island Register Co.,
Rock Island, All.
Tuttle & Balley Mfg. Co.,
Chicago, Ill.
Waterloo Register Co.,
Waterloo Lower Lower Lower Waterloo Register Co., Waterloo, Iowa

-Wood

American Wood Register Co., Plymouth, Ind. Auer Register Co., Cleveland, Ohio Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Regulators Co., Chicago, Ill. Chicago, Ill.

Ridging. Armeo Distributors Ass'n of America: Middletown, Ohio Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

The Kirk-Latty Co., Cleveland, Ohio Cleveland, Onio
Lamson & Sessions Co.,
Cleveland, Ohio
Ryerson & Son, Inc., Jos. T.,
Ch'go, N. Y., St. L., Det., Cleve.

The Kirk-Latty Co., Cleveland, Ohio Rods--Stove. Lanison & Sessions Co., Cleveland, Ohio

Rolls-Forming. Bertsch & Co., Cambridge City, Ind.

Roofing Cement. Connors Paint Mfg. Co., Wm., Troy, N. Y.

Roof-Flashing. Milwaukee Corrugating Co.,
Milwaukee, Wis. New Jersey Zinc Sales Co., The,
New York, N. Y.

Roofing-Iron and Steel. Armeo Distributors Ass'n of America, Middletown, Ohio Armeo Distributors Ass'n of America, Middletown, Ohio Central Alloy Steel Corp.

Massillon, Ohio Fnland Steel Co., Chicago, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City Osborn Co., The J. M. & L. A.,
Cleveland, Ohio Ryerson & Sons, Inc., Jos. T.,
Chgo., N. Y., St. L., Det., Cleve.

Roofing-Tin. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City Taylor Co., N. & G., Philadelphia, Pa.

Roofing—Zinc.

New Jersey Zinc Sales Co., The,
New York, N. Y.

Rubbish Burners.

Hart & Cooley Co.,
New Britain, Conn.

New Britain, Conn.

Ryerson & Son, Inc., Jos. T.,
Chgo., N. Y., St. L., Det., Cleve.

Schools-Warm Air Heating. St. Louis Technical Institute, St. Louis, Mo.

-Hardened Metallic Drive. Milwaukee Corrugating Co., Mil., Ch'go. La Crosse, Kan. City Parker-Kalon Corp., 200 Varick St.. New York

Screws-Hardened Self-Tapping, Sheet Metal. Milwaukee Corrugating Co., Mil., Ch'go, La Cresse, Kan, City Parker-Kalon Corp., 200 Varick St., New York -Perforated Metal.

Harrington & King Perforating
Co.. Chicago, Ill.

Shears-Hand and Power. Interstate Machinery Co., Chicago, Ill. Chicago, Ill.
Marshalltown Mfg. Co.,
Marshalltown, Iowa
Peck, Stow & Wilcox Co.,
Southington, Conn.
Ryerson & Son. Inc., Jos. T.,
Ch'go. N. Y., St. L., Det., Cleve.
Viking Shear Co.,

Sheet Metal Screws—Hardened, Self-Tapping. Parker-Kalon Corp., 200 Varick St., New York

Sheets-Black and Galvanized. Sheets—Black and Galvanized.

Armco Distributors Ass'n of
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Central Alloy Steel Corp.,
Massilion, Ohio
Inland Steel Co., Chicago, Ill.
Milwaukee Corrugating Co.,
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Osborn Co., The J. M. & L. A.,
Cleveland, Ohio
Ryerson & Son, Inc., Jos. T.,
Ch'go, N. Y., St. L., Det., Cleve.
Taylor Co., N. & G.,
Philadelphia, Pa.

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Position wanted by sheet metal worker and furnace installer. Not afraid of work and A-1 man. 30 years' of experience in both lines. Want position in small town and can come at once. Can make all furnace fittings and figure jobs. Address T-501, AMERICAN ARTISAN, 139 No. Clark St., Chicago, Ill.

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Furnace Fitting Superintendent—Thoroughly reliable, knows furnace fittings, efficiency in manufacturing, the keen competition. Can reduce your cost. Capable of building tools to short cut operations. I am looking for a live firm that can use a master in the game. Full information on request and can show results. Salary to depend on that. Address D-501, AMERICAN ARTISAN, 139 North Clark Street, Chicago, Illinois.

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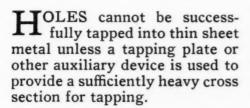
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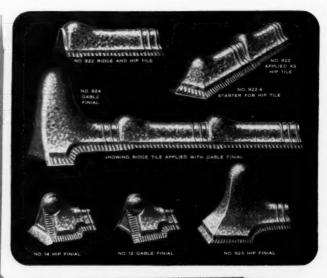
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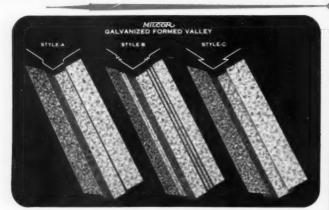
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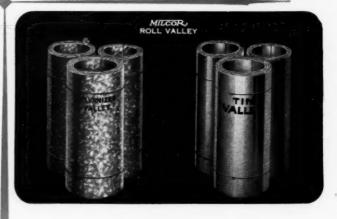
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